Africa and the global economic crisis: A Risk assessment and action guide

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Abstract

It is increasingly apparent that, despite earlier hopes, the global economic crisis will have a significant impact on the economies of Sub-Saharan Africa. In order to co-ordinate and craft the most appropriate responses for African economies to withstand and recover from the crisis, it is necessary to identify the degree to which the continent, as well as the individual African countries, is at risk of being negatively impacted. This depends on both vulnerability to trade and financial shocks, as well as the resilience of countries to cope with these shocks. Accordingly, vulnerability and resilience indices are constructed for the continent and individual countries. It is shown that, of all developing regions, Africa is the most at risk from the crisis: it has higher vulnerability to trade and financial shocks, and it has the least resilience of all regions. Based upon a vulnerability-resilience matrix, the African countries most at risk are the Democratic Republic of the Congo, Burundi, Côte D'Ivoire, Liberia, Angola, the Sudan, Chad, Guinea-Bissau, Guinea, Zimbabwe, Somalia, Kenya, Mali, Nigeria, Ghana, Cape Verde and Mauritania. With a few notable exceptions, such as Kenya and Ghana, these are all 'fragile states'. Based upon the distinction between vulnerability and resilience, an action guide is proposed. This makes a distinction between short-term and longer-term actions, in particular between actions aimed at mitigating the impact of the external shocks, assisting countries to cope, and actions aimed at reducing risk.

1 Introduction

The current global economic crisis, which has been forecasted to see world GDP decline by 1.3 per cent in 2009[1], has come as a substantial and largely unexpected external shock to the countries of Sub-Saharan Africa, the world's poorest continent. As a group of countries that are particularly dependent on foreign financial inflows and even more dependent on commodity-based export-led growth, they are now confronted by two simultaneous external shocks emanating from the advanced economies. The first is a negative shock to their financial flows due directly and indirectly to the financial crisis which erupted in October 2008 in the US and quickly spread to Europe and parts of Asia. The second is a negative shock to their exports, as demand and prices for Africa's products dropped as the US and European economies went into recession in late 2008.

These two simultaneous shocks pose a huge risk to African growth and development. They have hit precisely at the midpoint of the period towards the achievement of the Millennium Development Goals (MDGs) when various assessments have concluded that African countries are behind schedule. The real risk is now that progress will be further derailed.

Although economic growth is not a perfect development indicator, there is a fair consensus that economic growth is necessary for development. In the case of Africa, it has been estimated that an annual average growth rate of 7 per cent should be maintained in order to allow the continent to achieve at least MDG number one, which is to halve the number of people living on less than $ 1 per day. As a result of the shocks of financial and economic crisis, Africa's growth rate for 2009 and 2010 has been revised substantially downwards by international financial institutions. For instance, as is shown in **Appendix A**, the IMF has revised Africa's economic growth forecasts for 2009 downwards from 5 per cent in October 2008, to 3.5 per cent in January 2009 to 1.7 per cent in April 2009. And the World Bank has revised African growth prospects down to 2.4 per cent for 2009.[2]

The consequences of such a reduction in growth in a region that is already home to the largest number of low-income countries in the world is likely to be higher unemployment[3] and greater poverty,[4] increases in infant mortality, and adverse coping with long-lasting impacts, such as higher school drop-out rates, reductions in healthcare, environmental degradation and a rise in criminality and conflict.

How substantial are the risks to Africa, and what can be done to help African countries withstand the crisis?

These are the questions to which African countries, regional bodies, development organisations, the G-20 and the international community now need quick and practical answers.

In answering these questions, two aspects need to be kept in mind.

First, much is at stake in preventing economic growth from collapsing in Africa. Even if growth can be re-started again relatively soon, the effects of a growth acceleration and growth collapse are asymmetric. According to Arbache and Page (2008:9):

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1 See the IMF's World Economic Outlook, April 2009 (IMF, 2009a). Reviews and analyses of the causes of the crisis are contained in Morris (2008), Eichengreen *et al*., (2009), Taylor (2009) and others. A timeline of the financial crisis is provided by Guillén (2009).

2 The African Development Bank (AfDB, 2009) also predicts GDP growth of 2.4 per cent for Sub-Saharan Africa in 2009.

3 The International Labour Organisation (ILO, 2009) predicts that up to 3 million additional people could be left unemployed in 2009 in SSA as a result of the crisis, raising the total number of unemployed in SSA to 28 million.

4 The ILO (2009) estimates that the number of working poor in SSA could increase by up to 36 million between 2007 and 2009 as a result of the crisis.

> "While growth accelerations result in relatively small improvements in human development, decelerations have important negative impacts on education and health outcomes. Under 5 mortality and infant mortality, for example, are substantially higher during growth decelerations than in normal times, but they do not improve during growth accelerations."

The imperative of preventing or limiting growth collapses in Africa is therefore paramount if permanent or long-term scars on the continent's development is to be limited.

The second aspect to keep in mind in answering these questions is that, as the financial crisis comes hot on the heels of the fuel and food price crises, many African countries will have little means to stimulate domestic demand through expansionary monetary and fiscal policies. External financial resources will be required. Many estimates are now forthcoming as to the amounts needed. While this is important, it should not be forgotten that, even if the financial resources for Africa can be found, many governments may not have the capacity or the willingness to spend these resources effectively and efficiently. Many African states, as has been remarked earlier, are low-income countries and fragile states. Such states face added vulnerabilities during the downturn and have less resilience to recover. Here, different responses may be required to prevent the crisis from pushing some of them into failed states.

This paper attempts to address these questions by assessing the risk to Africa from the perspective of the recent literature on vulnerability to hazards (see, for example, Naudé, Santos-Paulino and McGillivray, 2008; 2009). Herein, the extent to which a country, region or household is at risk from an external shock or hazard will depend on its exposure to that risk, its vulnerability and its resilience. From this perspective, withstanding a hazard such as the global economic crisis requires measures to reduce risk, to mitigate the impacts of the hazard, and to strengthen the ability of the affected countries to cope. Thus, this paper will first (in Section 2) define and discuss the concepts of risk, vulnerability and coping, and their measurement. Thereafter (in Section 3), it will analyse Africa's exposure and vulnerability towards the two external shocks. Then (in Section 4), it will consider how resilient African countries are.

Section 5 aims to bring the analyses of the previous sections down to the country level, and offers a categorisation of individual African countries into countries at high, medium and low risks. Such a categorisation may be useful when considering the type of support and the prioritisation of support measures to African countries. Thus, the categorisation is kept in mind in Section 6, which deals with responses towards weathering the crisis. These focus on risk reduction, risk mitigation and risk coping, and identify measures which African countries and the international community can take in each of these.

Finally, Section 7 contains some concluding remarks. It provides a reminder that African countries already faced severe development challenges before the current crisis. When the short-term imperative of managing the crisis is past, African countries and the international community will have to pick up the development agenda where it left off, and factor in the longer-term structural changes in the global economy and in development-thinking which the crisis may bring about. The short-term actions of the international community and African governments should not detract from the long-term task of fixing Africa's economies.

2 Risk, Vulnerability and Coping

The risk and extent of Africa being negatively affected by the global economic crisis depends on its vulnerability towards external economic shocks as well as its resilience (or coping) in the face of such shocks.

Vulnerability has been defined as the probability of a "system" undergoing a negative change due to a "perturbation" (Gallopin 2006: 294). This is a broad definition which allows for systems to be countries, regions and households, whereas the tradition in micro-economics has been to define vulnerability at household level simply as the probability that a household will fall into poverty or remain in poverty in a future period (see, for example, Chaudhuri *et al*., 2002; Günther and Harttgen 2006). Guillaumont (2008:5) defines vulnerability as "*the risk that economic growth is markedly and extensively reduced by shocks*".

Countries are economically vulnerable to the extent that they are exposed to external shocks (which is outside their direct control). Sources of external shocks can be natural events (which will not be considered here), as well as international trade and financial shocks. The extent of a country's exposure to the latter will generally depend on its dependency on exports and its degree of export diversification, and on its openness to financial flows. More specifically, economic vulnerability has been measured in the economic literature by a variety of measures related to a country's foreign trade and investment profile. The most widely recognised measures of economic vulnerability include (see, for example, Briguglio *et al*., 2008; Guillaumont, 2008):

- The **openness** of an economy as measured by the share of exports in GDP. Countries with a higher share of exports in GDP are seen as being more susceptible to adverse changes in external demand;
- The **degree of diversification** of a country's exports, as measured for instance by a Herfindahl-Hirschman index. Countries whose exports are more diversified are seen as less vulnerable to external shocks, even if their absolute level of exports is high;
- The **external indebtedness** of a country, as measured by external debt as a share of GDP. States with high debt burdens or liabilities most often do not have the resources to respond to the mitigation of poverty or the potential impacts of external shocks.[5]

These vulnerability measures, common, for instance, in standard economic vulnerability indices, such as the UN's Economic Vulnerability Index (EVI), ignore the potential vulnerability stemming from a country's financial openness or integration into the global financial system. In this particular crisis, an important feature has been the contagion effects through the banking sectors of developed countries. In this paper the economic vulnerability measures will, therefore, be complemented by financial/banking vulnerability measures. In the context of Africa, for which detailed data on the banking sector may be hard to come by, the most readily available of such measures will include (following the IMF, 2009a):

- The regulatory **capital to risk-weighted assets** of a country's banking system. The amount of capital kept by banks act as a buffer against losses. One of the features of the financial crisis in the US and the EU has been the extent to which banks have been highly leveraged, and have ended up with insufficient capital once they started to have non-performing assets on the balance sheets. Higher capital to (risk-weighted) asset ratios would be indicative of a lower vulnerability of a country's banking sector.
- The extent of a country's banks **cross-border liabilities** to banks in advanced economies. This can be measured by the amount of liabilities of a country's banking sector to banks in BIS (Bank for International Settlements) member countries. This is a good measurement of the international integration of a country's banking sector, and thus of its concomitant vulnerability should banks in advanced economies suffer losses.

[5] The IMF and World Bank, since 1996, identify a category of states that are both poor and heavily indebted – "Heavily Indebted Poor Countries" (HIPCs). Of 41 HIPCs in 2007, 80 per cent are in Africa.

- The extent of the **growth of credit to the private sector**. In countries where this had grown very rapidly in recent years, banks may be more exposed to non-performing loans – a more indirect impact of the financial crisis. In such instances, banks would need to be carefully supervised and monitored, as an increase in non-performing loans could create both liquidity- and solvency-problems for banks.

When an external shock does occur, the risk of it causing negative change, and the extent of that change, not only depends on the economic vulnerability of a country, but also depends on its resilience. Resilience refers to a country's coping ability, *i.e.*, its ability to recovery from a shock. According to Briguglio *et al*., (2008:2):

> "economic resilience is associated with actions undertaken by policy-makers and private economic agents which enable a country to withstand or recover from the negative effects of shocks. Actions which enable a country to better benefit from positive shocks are also considered to be conducive to economic resilience."

Guillaumont (2008) makes a distinction between structural economic vulnerability, which is exogenous to a developing country, such as the financial crisis in the US, and state fragility, which is vulnerability due to inappropriate policies, institutions and weak governance. This implies that, in order to deal with vulnerability, we would need to deal not only with the sources of vulnerability in the external environment, but also with "self-inflicted" vulnerabilities due to various degrees of state fragility. Indeed, in Africa, self-inflicted vulnerability may be a important factor which reduces resilience, as it is the continent with the largest number of formally identified "fragile states" in the world.[6]

The most widely recognised measures of resilience include (see, for example, Briguglio *et al*., 2008):

- Proper **macro-economic management**, which will be reflected in *balance of payments* and *fiscal balances*, and levels of *currency reserves*. Countries which have and who can manage these well, will be more resilient in the face of the global economic crisis. Countries with large balance of payments and/or fiscal deficits will have more difficulty responding to external shocks, and low levels of foreign exchange reserves may cause countries to suffer sudden and debilitating changes in relative prices and access to imported goods. It is telling that, after the 1998 Asian crisis, many developing countries started purposely to accumulate greater foreign exchange reserves as insurance against future external shocks.
- **Good governance**. Governance refers to "the manner in which power is exercised in the management of a country's economic and social resources for development" (World Bank 1992, as quoted in Cannon, 2008:8). The World Bank's Worldwide Governance Indicators (WGI) defines governance as: "the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them." (World Bank, 2009 http://info.worldbank.org/governance/wgi/index.asp). Good governance en-

[6] A fragile state can be fined as a state that 'cannot provide the basic functions of governance to its population (CIFP, 2006:3). The World Bank describes low-income countries "under stress" (LICUS) as "fragile states". These are low-income countries with a score of 3.0 or less in terms of its Country Policy and Institutional Assessment (CPIA) ratings. SSA's fragile states according to the World Bank are Central African Republic, Comoros, Liberia, Somalia and Zimbabwe (severe fragile states), Angola, Burundi, Congo, Democratic Republic of Congo, Côte D'Ivoire, Eritrea, Guinea, Guinea-Bissau, Nigeria, Sudan, Togo (core fragile states) and Chad, the Gambia, São Tomé and Principe, Sierra Leone (marginal fragile states).

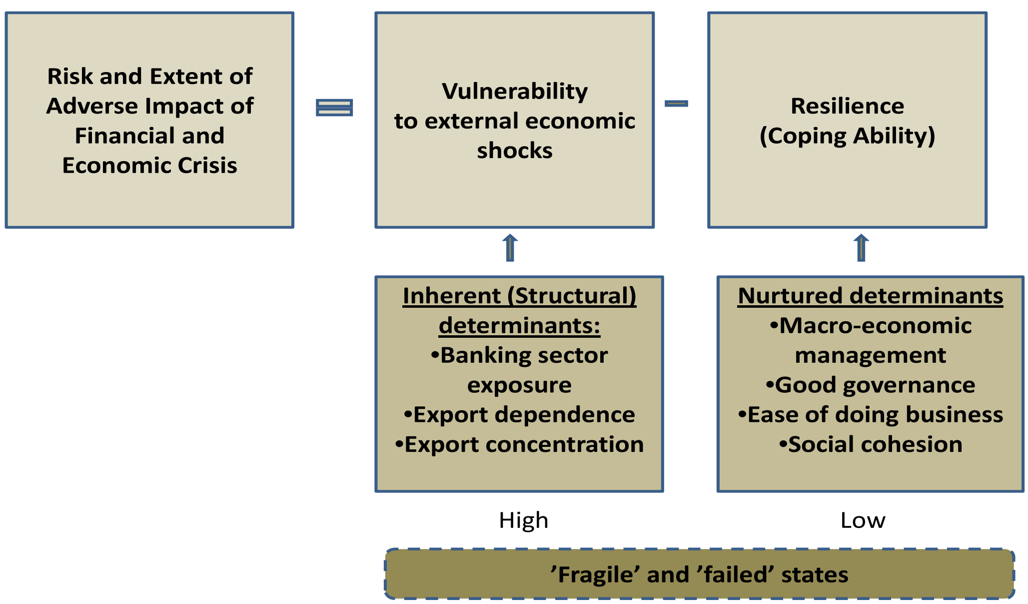
ables countries to respond in time and appropriate fashion to the global economic crisis.

- **Market efficiency** or the environment for doing business. With a conducive environment for doing business, "*markets adjust rapidly to achieve equilibrium following an external shock, the risk of being negatively affected by such a shock will be lower than if market disequilibria tend to persist*." (Briguglio *et al.*, 2008: 9). Countries in which it is easy to establish a new business may be more resilient that countries in which it is more difficult.
- **Social cohesion**, which is often measured using ethno linguistic fractionalisation, income inequality or political instability. Strong social cohesion may make it easier and quicker for countries to adopt and see through tough, but necessary, measures to manage the impacts of the global economic crisis.

The concepts of vulnerability and resilience are often confused by policy-makers and academics. For instance, the African Development Bank (AfDB, 2009b) sees the vulnerability of African countries as being determined by macro-economic balances and poverty. In the framework discussed here, however, it is clear that macro-economic imbalances and poverty are not structural features which are outside the short-term control of governments. They are, indeed, the outcomes of the degree of resilience of an economy, whereas the underlying structural determinants of vulnerability resides in the openness and exposure of their economies to global markets.

As a framework for exploring how African economies can withstand the financial and economic crisis, the approach discussed so far is summarised in **Diagram 1**.

Diagram 1: A Vulnerability–Resilience Framework for Conceptualising the Impact of the Financial and Economic Crisis on Africa



(Source: Adapted from Briguglio *et al.*, 2008)

Diagram 1 indicates that the risk and extent of an adverse impact of the global economic crisis on African economies will depend on their vulnerability to external economic shocks (which depends, in turn, on structural aspects of their economies and their integration into the world economy) as well as on their resilience (which can be nurtured, and depends on good economic management, good governance, ease of doing business and social cohesion). The diagram suggests that, in the case of fragile and failed states, this vulnerability will be high, while resilience will be low.

The approach that will be taken in the remainder of this paper is to assess Africa's vulnerability and resilience in the light of this framework. Little can be done over the short-term to address the vulnerability of African countries. However, by identifying the most vulnerable countries, and the countries in which resilience is low, priorities for assistance and special support may be identified. These may address vulnerabilities directly (such as supporting African trade) or aim to strengthen resilience (such as by budgetary aid and easing constraints on the business sector).

In terms of the remainder of this paper, it will be shown in Section 3 that Africa as a continent faces particularly high vulnerability, and, in Section 4, that the overall level of resilience is low. Then, in Section 5, individual countries are categorised. The purpose of such categorisation is to identify the African countries which are more likely to be worst affected by the crisis, and which ones will most be in need of external assistance. Then, the remainder of this paper identifies the types of support measures for countries with different vulnerability-resilience profiles.

3 How Vulnerable is Africa?

With reference to **Diagram 1**, the **Table 1** compares Sub-Saharan Africa (SSA) with other regions in the world in terms of a selection of structural indicators of vulnerability towards external trade and financial shocks.

It makes a broad distinction between financial and trade vulnerability, although, in practice, these are inter-related. Financial vulnerability here refers to the exposure of SSA to possible adverse shocks in the advanced economies' banking sectors (for example, contagion due to toxic assets) and in important sources of external finance, such as aid, remittances, FDI and portfolio equity flows. Trade vulnerability refers to the exposure of SSA to possible adverse shocks to their export demand, export prices, and debt servicing capacity.

3.1 Financial Vulnerability

Table 1 partly confirms the view that the SSA's financial institutions may be less immediately affected by direct contagion from US and EU banks, due to their relatively-limited global integration. Thus, the Table indicates that, by 2006-7, the SSA's liabilities to foreign banks were less than 1 per cent of GDP – compared, for instance, to 9 per cent in East Asia and the Pacific, and almost 5 per cent in Latin America and the Caribbean.[7] According to the IMF (2009a: 27), African countries have, so far, avoided banking crises as elsewhere due to:

> "the still limited though increasing integration with global financial markets, minimal exposure to complex financial instruments, relatively high bank liquidity, limited reliance on foreign funding, and low leverage in financial institutions."

But African financial institutions may not yet be out of the woods. **Table 1** also suggests that domestic credit to the private sector had significantly increased in the SSA in recent years, and now exceeds that of all developing regions except for East Asia and

[7] The countries of "emerging Europe", were amongst the most significantly impacted upon by the financial meltdown affecting US and Western European banks. Hungary, Iceland and Ukraine were amongst the countries needing emergence assistance from the IMF by the end of 2008. At the time of the outbreak of the crisis, these countries' liabilities towards US and European Banks exceeded 50 per cent of GDP (IMF, 2009a).

the Pacific. In addition, in about half the African countries, foreign ownership in the local banking sector is significant – with foreign banks owning more than 50 per cent of local banking assets. To the extent that African banks may start to face adverse developments in their balance sheets due to exposure to, and linkages, with foreign banks, that the impact is more likely to come from the more substantial linkages with Western European, rather than US banks – especially banks in the UK, Portugal and France. This could, however, also be a cloud with a silver-lining, given that Western European banks have been less affected than US banks.

Table 1: Measures of Economic Vulnerability of SSA in comparison to other regions (most recent date, of 2007 or 2006)

	Latin America and Caribbean	Middle East and North Africa	East Asia and the Pacific	Sub-Saharan Africa
Financial Vulnerability				
Liabilities to Advanced Economies' Banks (% of GDP)	4.69	1.70	9.15	0.92
Portfolio equity flows (as % of GNI)	0.40	0.16	1.52	2.43
Domestic credit to private sector (% of GDP)	36.62	42.13	97.55	70.38
Stocks traded, total value (% of GDP)	24.28	18.82	191.23	60.90
Aid (% of GNI)	0.19	1.83	0.20	4.45
Remittances (% of GDP)	1.76	3.74	1.51	2.46
Foreign direct investment, net inflows (% of GDP)	3.00	3.69	4.06	3.41
Trade Vulnerability				
Exports of goods and services (% of GDP)	24.04	36.05	47.94	34.46
Export concentration index*	0.15	0.46	0.11	0.40
Fuel exports (% of merchandise exports)	13.87	75.42	7.32	39.35
Fuel imports (% of merchandise imports)	10.86	13.70	14.11	16.73
External debt stocks (% of GNI)	23.74	18.94	17.02	24.85
Short-term debt (% of total reserves)	31.06	8.92	15.54	31.41
Total reserves (% of total external debt)	54.58	154.91	253.08	80.28
Total reserves in months of imports	7.68	20.13	15.16	7.46

(Note: * the export concentration index is from UNCTAD's export concentration index, which is a normalized Herfindahl-Hirschmann index where 1 is maximum concentration)
(Source: Author's compilation from World Bank Development Indicators, IMF (2009a) and UNCTAD)

Table 1 moreover indicates that, whereas the direct contagion impact on Africa's banks may be less of an immediate danger than in other regions, its financial sector, more broadly, may be negatively impacted.

Portfolio equity flows (short-term financial inflows) in SSA stood at over 2 per cent of GDP. Adverse movements in these flows will have a swift impact on stock markets, exchange rates, and, indirectly, will affect banks' balance sheets.

Africa's stock markets have seen quite rapid development since the early 1990s, and, as Table 1 shows, by 2006, stocks traded on Africa's markets reached over 60 per cent of GDP - a higher proportion than in Latin America or MENA.[8] The potential impact of a sudden reversal in portfolio equity flows as a "flight to safety" response may, therefore,

[8] According to the IMF (2009b:16), Africa's stock market capitalisation stood at US $ 1,182 billion in 2006, which was 107 per cent of Africa's GDP – a percentage exceeding that of Latin America (63 per cent), the Middle East (82 per cent) and emerging Europe (73 per cent).

be particularly damaging, as, indeed, subsequent events have shown. By the end of 2008, the South African stock market (the largest in Africa) had lost 25 per cent of its value, and, by the end of March 2009, the Nigerian stock market's All Share Index had fallen by 37 per cent in one quarter – the largest such decline in the world.[9]

Although the SSA's relatively limited internationally integrated financial sector offers some protection against direct contagion effects, there is concern that the financial crisis will hurt African financial development over the longer term. As expressed by Maimbo (2008:1):

> "...the impact on the financial sector in Africa may actually be more significant and longer lasting than first assumed."

He discusses the impact of the crisis in weakening African stock markets, stifling innovation and less conservative lending practices, leading to significant losses in central banks' reserve assets,[10] in entrenching government ownership in the financial sector, and in weakening bank balance-sheets to the point at which bank failures could occur.

In addition, many foreign (western) banks may reduce operations in Africa as a result of the crisis, with negative implications for the availability of credit and the financial innovation on the continent.

Table 1, furthermore, shows that, as far as financial vulnerability is concerned, Africa is more dependent than any other region on aid (official development assistance) and the second most (after the MENA region) on remittances. Aid and remittances constituted more than 7 per cent of Africa's GDP by 2006 – in terms of 2007 values, this is an amount of around **$ 60 billion**.

Africa's share of global FDI has historically been small (less than 2 per cent), but, in terms of Africa's GDP, FDI had increased in importance in recent years, with especially resource-rich and oil-rich countries attracting the bulk of Africa's FDI. By 2007, FDI amounted to about 3.5 per cent of Africa's GDP. The value of FDI is not only in its financial contribution, but also in bringing access to technology, know-how and international markets.

Taken together, FDI, aid, remittances and portfolio outflows, the amount of financial resources at risk to Africa may amount to around 12–15 per cent of Africa's GDP. Clearly, it is unlikely that any of these, will be reduced to zero, but even if the extent of the reduction is only limited to a 30–40 per cent drop, it may still amount to a **$50-60 billion** annual decline in financial resources.

How likely is it that declines of such magnitudes will be realised? This will depend on the depth and duration of the crisis in the advanced economies. However, a number of predictions have been made of the likely reductions in financial flows to African countries.

3.2 Trade vulnerability

While undoubtedly vulnerable towards declines in external financial resources, and with estimates of these declines ranging between **$20 and 50 billion** per annum, the most significant impact of the financial and economic crisis on Africa will be through the loss in Africa's exports.

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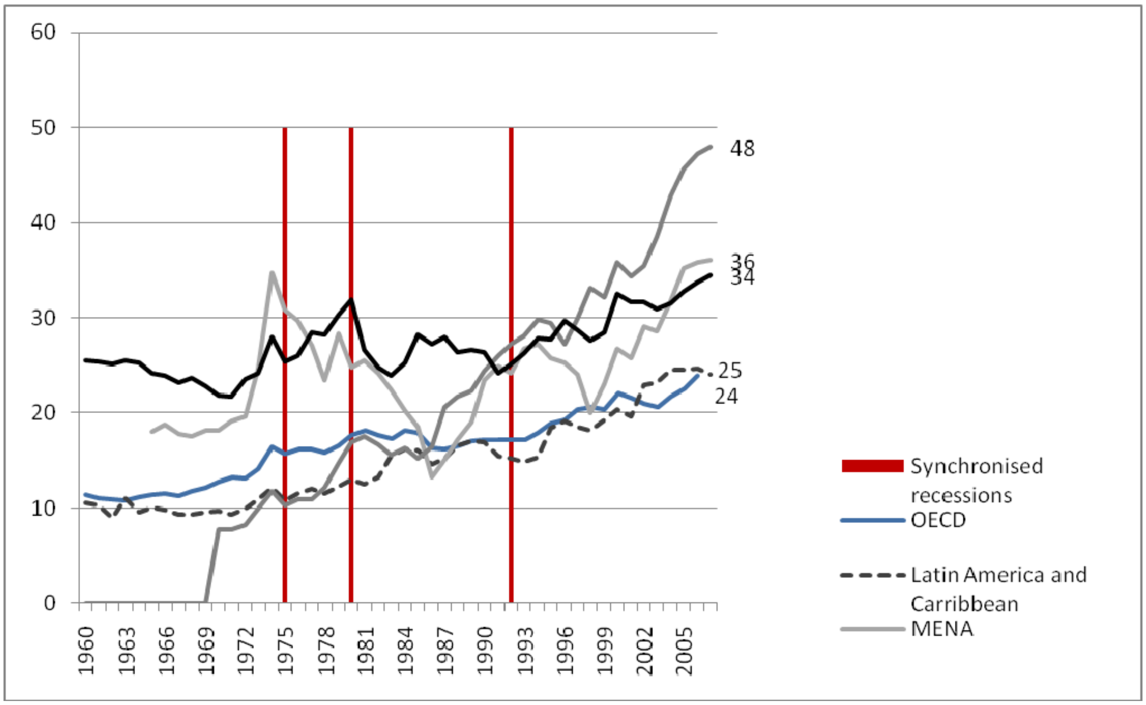
9 See 'Nigeria Becomes World's Worst Market on Bank Losses' at: http://www.bloomberg.com/apps/news?pid=email_en&refer=world_indices&sid=aHYaT8.nfkg0#.

10 As discussed by Maimbo (2008) in recent years the foreign currency reserves of many African central banks had grown. Sizeable shares of these were managed by external fund managers and may have been invested securitised assets originating in the US.

Table 1 show the extent of Africa's exposure towards potential adverse changes in external demand. It shows that, in terms of the share of exports in GDI in 2007 (34.5 per cent), only East Asia and the Pacific and the Middle East and North Africa have higher shares. However, the Middle East and North Africa's high share is a recent phenomenon, driven by increases in fuel prices.

Considering **Figure 1** below, it can be seen that the share of exports in GDP has always been high in SSA. Indeed, between the period 1977 to 1990, the share of exports in GDP was higher in Africa than any other continent or region. It can also be seen from Figure 1 that there seems to be a strong relationship between declines in Africa's export share and globally synchronized recessions,[11] and between declines in Africa's export share and declines in African growth.

Figure 1: Exports as percentage of GDP, 1960–2007

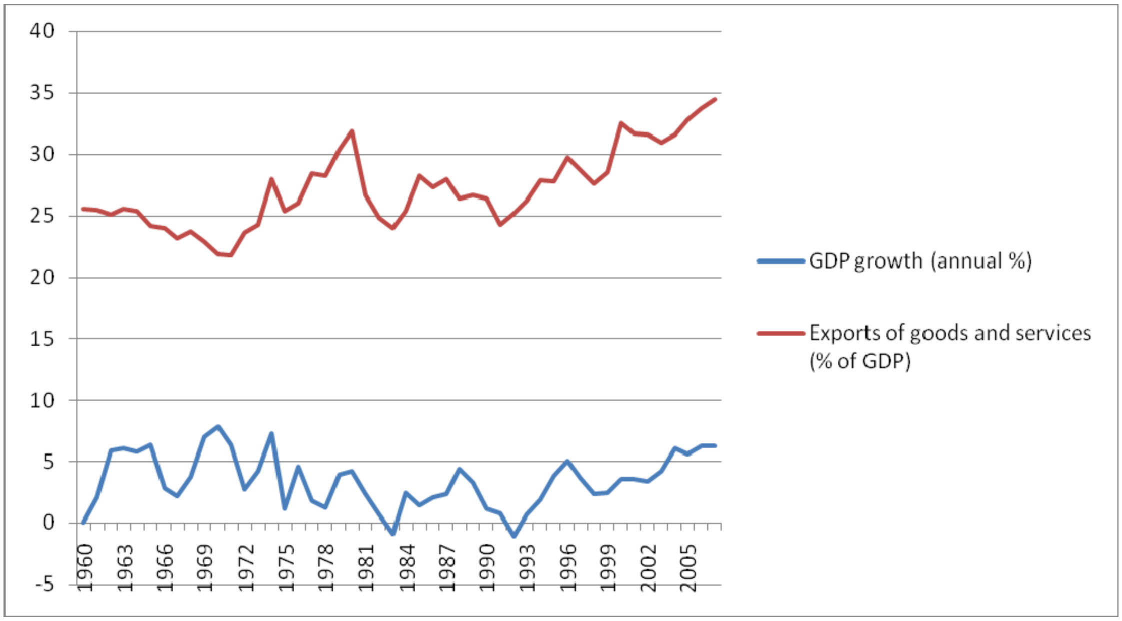


(Source. Author's calculations based on World Development Report Online Data)

From Figure 1, one can see declines in the export-GDP relationship preceding declines in African growth rates. It would seem that the relationship between openness (exports) and economic growth had become stronger in Africa since the 1980s – when many countries started to implement Structural Adjustment Programmes (SAPs), which entailed trade liberalisation. This can be seen more clearly in Figure 2, which graphs Africa's export share and GDP growth rates between 1960 and 2007.

[11] There were three years, prior to 2009, when 10 or more of the 21 advanced economies were simultaneously in recession, namely, 1975, 1980, and 1992 (IMF, 2009a).

Figure 2: Export as percentage of GDP and GDP growth in Africa, 1960–2007



(Source of data: World Bank Development Indicators)

A simple OLS regression of GDP growth on the export share in Africa over the period 1980 to 2007 finds a statistically highly significant relationship, with the co-efficient of the export share equal to 0.55 and statistically significant at the 1 per cent level. Moreover, 68 per cent of the variation in African economic growth over this period is explained by the export-to-GDP share alone. This suggests that Africa is highly reliant on export markets, and that declines in export demand will cause declines in economic growth.

There are three[12] main reasons to expect that Africa's exports will decline during the current financial and economic crisis:[13]

One is due to the decline in *export demand* from Africa's major markets in the EU and the US.

The second is due to the decline in *commodity prices*. Most African countries are either dependent on mineral and metals exports, oil exports, and/or agricultural raw material exports. The demand for, and the prices of, these commodities have a significant impact on export revenues of African countries, and on their subsequent growth. Because of the concentration of most of Africa's exports into this relatively narrow range of goods, they are highly vulnerable to changes in their prices and in demand, and, as such, there have been many calls on African countries to diversify their exports.

A third reason which may contribute to a decline in Africa's exports is the greater scarcity and cost of *trade finance*.

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12 A further reason that will lead to a reduction in the foreign exchange receipts in some African countries is the decline in international tourism. However, given that Sub-Saharan Africa has, for various reasons, not been a popular tourist destination, the aggregate impact is not likely to be hugely significant (see, for example, Naudé and Saayman, 2005). The individual Sub-Saharan African countries where tourism does play a significant role are Cape Verde, the Gambia, Mauritius and Kenya. Over the longer-term, the tourism potential in Africa is significant and would be an important source of economic diversification.

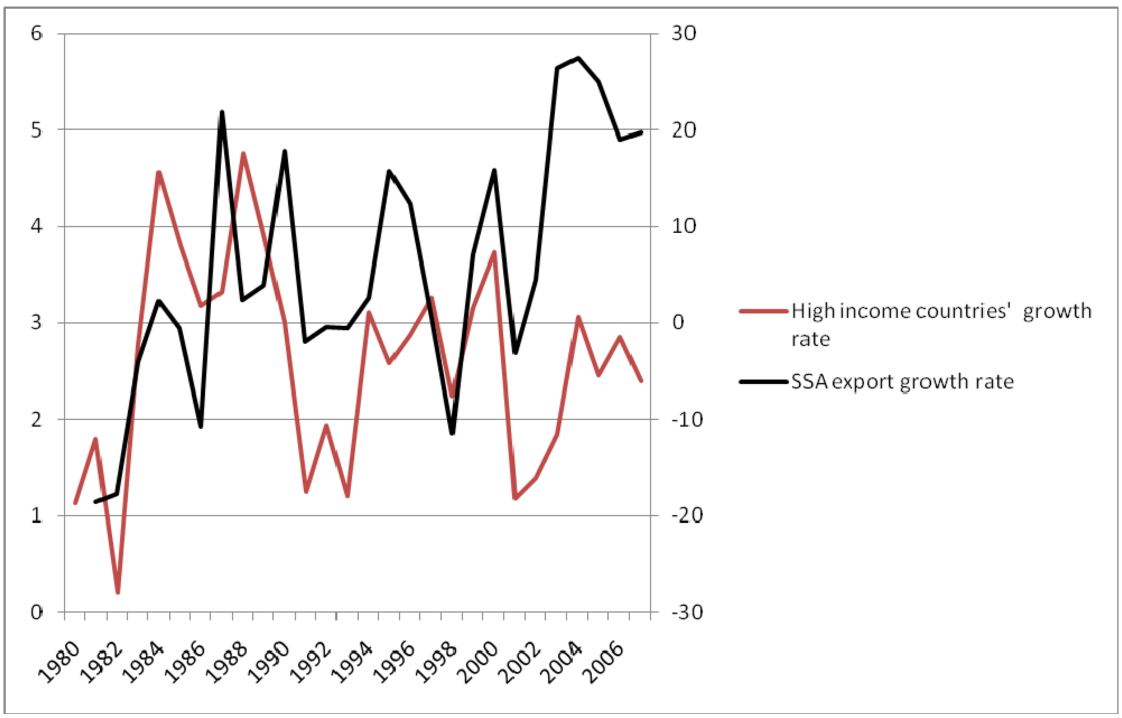
13 The IMF (2009b) forecast a decline of 8.7 percentage points in Africa's share of exports in GDP in 2009, and a stabilization of the share at around 33 per cent in 2010.

Consider, first, the potential decline in export demand. Africa's traditional export markets are the EU and US. In recent years, trade with China, and other "southern engines of growth", such as Brazil and India, has increased significantly.[14] This has led some to hope that there has been some measure of "decoupling" of growth rates between Africa and the OECD countries, and that a decline in demand from the OECD would be cushioned by the growing demand for Africa's exports from China and other emerging economies. At issue, here, is the diversity of Africa's export destinations.

However, despite the hopes of a "decoupling" due to an increase in trade between Africa and other emerging markets, Africa's exports are still largely dependent on demand from the EU and US. The reason for this is largely historical, but is also due to trade preferences from the EU and US (see the *Everything but Arms Initiative* and the *Africa Growth and Opportunity Act*). Figures A1 and A2 in **Appendix B** show the direction of African exports in 1999 and 2007. Although it shows the dramatic increase in the share of exports from Africa destined for China, it also indicates that 69 per cent of Africa's exports are still destined for advanced economies (of which 30 per cent still goes to the Euro area).

Growth in African exports are, therefore, still particularly dependent on demand from high income countries, in particular, the EU and US, and, by implication, on GDP growth in these countries. **Figure 3** depicts the close relationship between African export growth (as percentage growth in current $ value of exports) and GDP growth in high-income countries.

Figure 3: African Export Growth and GDP Growth in High-Income Countries, 1980-2007



(Source of data: World Bank Development Indicators)

Figure 3 shows that African export growth has been faster than the growth rates of the high-income countries as a group. When high-income growth changes, African export growth changes in similar directions. However, one change since the 1990s is that

[14] Between 1999 and 2007, the nominal value (in $) of Africa's exports to China increased by 1537 per cent.

African export rates have increasingly tended to accelerate faster when there is an upturn in high-income country growth. Thus, after the downturn of 2000, high-income countries' growth rate increased by 1.89 per cent between 2001 and 2004; at the same time, African exports accelerated from a -3 per cent contraction to over 27 per cent growth – *15 times faster*. In contrast, when high-income country growth recovered after the 1992 recession, African exports accelerated only 8 times faster.

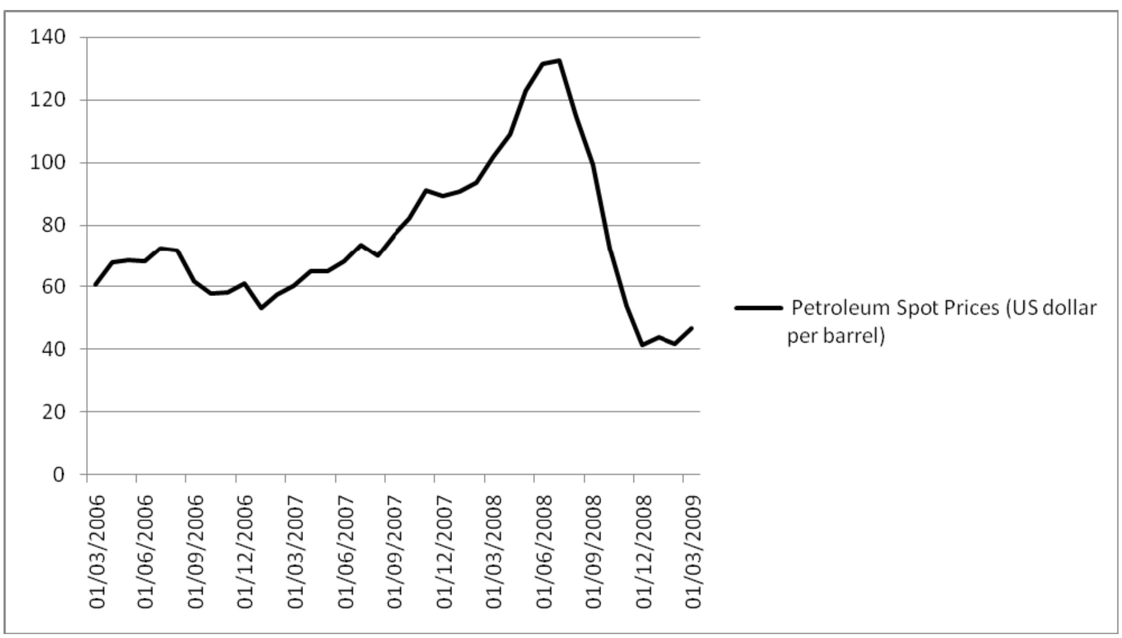
Figure 3 also shows that export growth in Africa remains sensitive to downturns in high-income country growth. Thus, during the downturns of the 1992 global recession, the 1998 East Asian crisis and the 2000 dot-com crisis, we find that African export contracted in each case (indeed, much more during the East Asian crisis). If, in a possible worst-case scenario, African export growth did, in 2009, indeed contract to 0 per cent, then, based upon 2007 export values (in current $), the continent could lose around **$ 63 billion** in income. Limiting the loss of exports is therefore vital to minimise the impact.

A second reason to expect a decline in Africa's export revenue is due to the decline in *commodity prices*. The global economic crisis has been accompanied by a significant decline in commodity prices, as the demand for fuels, metals and food started to fall off. Increases in the prices of commodities, particularly of fuel, metals and agricultural raw materials, have been underpinning much of Africa's good growth since the early 2000s. Between January 2003 and July 2008, energy, food and metal price indices rose respectively by 329, 102 and 230 per cent (IMF, 2009a). This not only benefitted countries exporting these goods, but also put pressure on the balance of payments of countries dependent on imported fuel and food. Nevertheless, despite important country differences, the overall impact on African growth was tremendously positive, as African countries in general (oil exporters as well as oil importers) achieved an 8.1 per cent GDP growth rate between 2003 and 2006 (IMF, 2009a).

But the declines in commodity prices have, perhaps, been even more rapid than their rise. Commodity prices generally peaked between March and July 2008, just when initial concerns about further fallout from the US sub-prime mortgage crisis were being raised.

In Figures 4 to 6 the sudden fall in prices of fuel (Figure 4), metals (Figure 5) and agricultural raw products (Figure 6) are depicted.

Figure 4. Petroleum Spot Prices (US $ per barrel), March 2006–March 2009

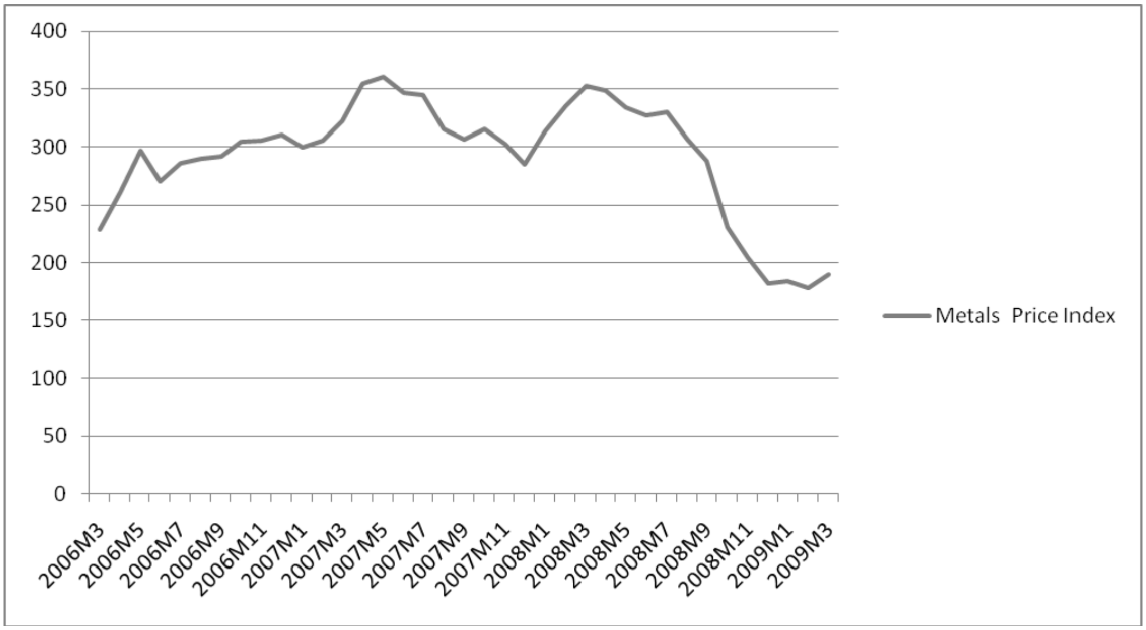


(Source of data: IMF, 2009a)

Figure 4 shows the sudden and sharp decline in the price of oil between July 2008 and March 2009. Given that almost 40 per cent of Africa's total exports consist of oil (see Table 1) this would come as a severe shock to Africa's oil exporting countries (but would ease the pressure on Africa's oil importers).

Sub-Saharan Africa's current oil exporters are Angola, Chad, the Congo, Equatorial Guinea, Gabon, Nigeria and the Sudan. They have also been amongst the fastest growing economies in Africa in recent years.[15] With the exception of Chad and Sudan, they have all enjoyed substantial current account surpluses.

Figure 5. Metal Price Index (2003=100), March 2006–March 2009



(Source of data: IMF, 2009a)

A number of African economies are important exports of minerals and metals, such as the platinum group metals (PGMs), gold, diamonds, copper, chromium, zinc, manganese, nickel, dimension stone and a host of other metallic and non-metallic minerals used mainly in manufacturing and construction. In recent years, a substantial proportion of the demand for these minerals/metals have been coming from China's manufacturing and construction sectors.

Figure 5 shows that the average prices of these commodities have declined since mid-2008 and March 2009 by more than a 150 per cent. Some of the countries that are most likely to be negatively affected by these declines include Botswana (diamonds), the Democratic Republic of Congo (diamonds, copper), Mozambique (alumina), South Africa (PGMs, gold), and Zambia[16] (copper).

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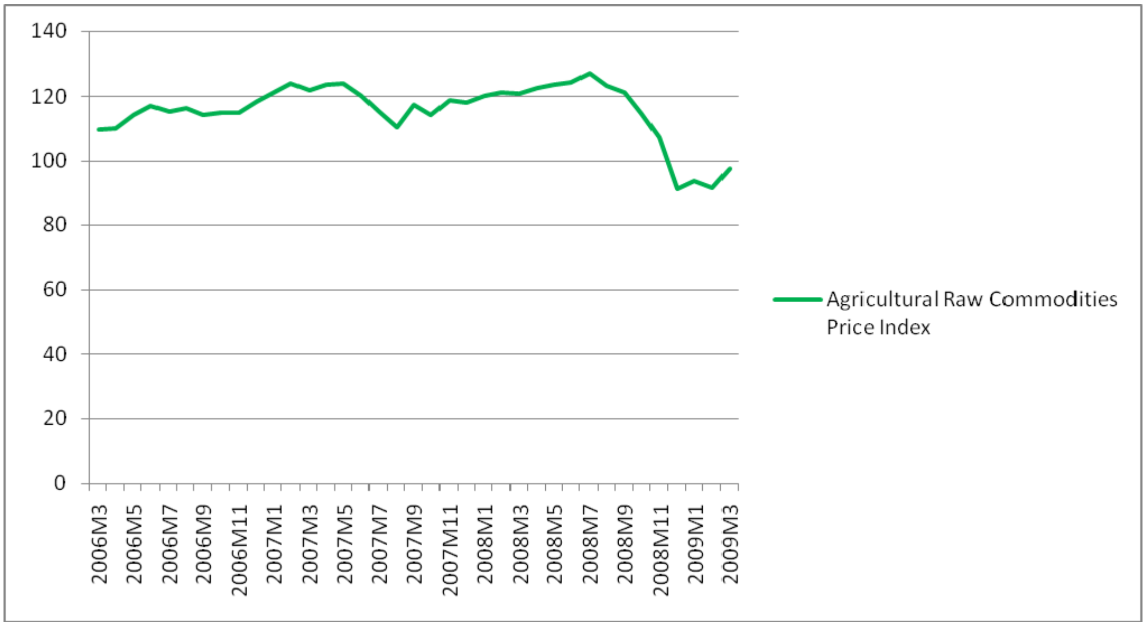
[15] For instance, between 2005 and 2008, the Angolan economy grew on average by 19 per cent annually. It is the second largest SSA oil producer after Nigeria, with a capacity of just over 2 million barrels per day.

[16] Green (2009) documents the impact of the dramatic fall in the price of copper (from $ 9,000 per ton in July 2008 to $ 2,900 by December 2008) on Zambia, pointing that, as a result, the country's growth forecast for 2009 had been reduced from 6 per cent to 1.6 per cent.

Figure 6. Agricultural Raw Commodities Prices Index, March 2006–March 2009



(Source of data: IMF, 2009a)

Figure 6 shows that agricultural raw commodity prices also declined sharply after June 2008. However, in comparison with the steep declines in fuel and metal prices, agricultural commodity prices have not declined as significantly, with the index depicted in Figure 6 declining by about 30 per cent.

The major agricultural commodities exported by African countries include cotton, coffee, cocoa, grains and cereals, fresh fruit, horticulture (for example, cut flowers), *etc*. Most African countries have been traditionally dependent on the exports of these commodities, and agricultural exports remain a significant proportion of total exports from African countries.

Thus, a major source of vulnerability to the trade of African countries is that their exports tend to be concentrated. This accentuates the impact of declining commodity prices. Table 1 showed that, measured by the export concentration index of UNCTAD, the degree of concentration in SSA is the highest of all regions. Table C1 and Figure C1 in **Appendix C** also show that the export concentration is the highest of all amongst Africa's oil exporters – they are, consequently, amongst the most vulnerable of African countries, given the substantial declines in oil prices.

A third factor that could contribute to a decline in African exports is a shortage of *trade credit*. The precise magnitude of the trade finance gap in Africa is not yet known, although the World Trade Organisation (WTO) increased their estimates of the gap in global trade finance from an initial estimate of $25 billion in November 2008 to $100 billion by March 2009. The fact that many African exporters have been affected by this is confirmed by the African Bank, which reports an increase in applications for trade credit to its own facilities as well as to those of the International Finance Corporation (IFC).

Finally, with reference to **Table 1**, it can be seen that Africa's trade vulnerability will be higher, because: (a) its export concentration is much higher, exposing its trade to declines in demand and prices of a few commodities and thus negatively impacting on its terms of trade; (b) its foreign indebtedness is on average the highest of all regions; and (c) its total reserve levels are the most precarious. Despite the good export growth of recent years and improvements in many countries' balance of payments positions, by 2006, Africa could still not cover its external debt by foreign reserves, although, in recent years, progress in debt relief has eased matters slightly. One particular cause of vulnerability is that a substantial part of this debt is short-term in nature – Africa needs to set aside more than a third of its reserves for short-term debt.

Foreign exchange reserves and the position of a country's balance of payments can be causes of vulnerability, although, when they are part of a well-managed macro-economic policy, they can be a source of resilience. In the next section, the resilience of African economies in the face of external economic shocks is investigated.

4 Assessing Africa's Resilience

In terms of the approach adopted in this paper (see **Diagram 1**), Africa's resilience in the face of external shocks depends on macro-economic management, good governance, ease of doing business, and social cohesion. In this section, it is assessed how likely Africa is to cope with its likely exposure to the crisis identified in the previous section.

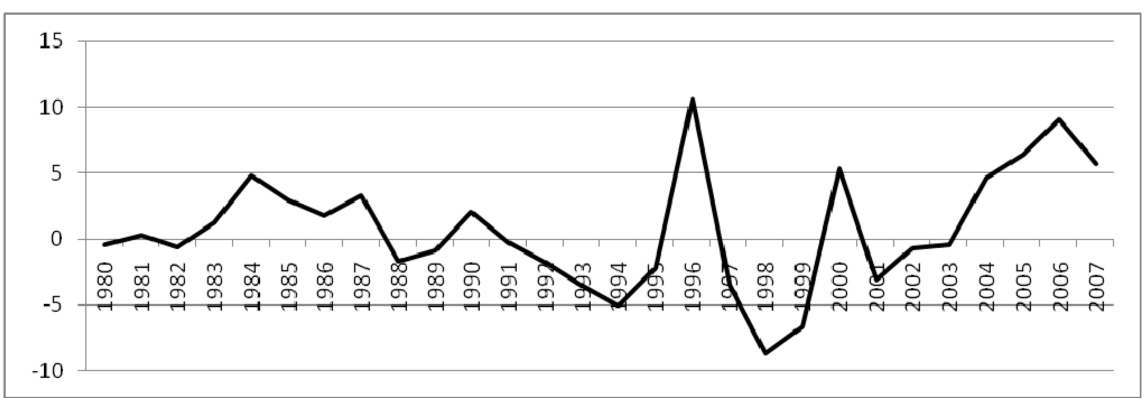
4.1 Macro-economic management

Following the IMF (2009a), the resilience of African economies can be considered with reference to its current account (Figure 7), fiscal balance (Figure 8) and import cover (Figure 9).

Figures 7, 8 and **9,** in particular, show that, in terms of its broad macro-economic indicators, African countries, as a whole, have done remarkably well in recent years. In aggregate, these would suggest much better macro-economic resilience than the continent had in 1983 and 1992, when continent-wide growth dipped into the negative figures. In particular, Africa's fiscal balances are now overall in surplus, whereas previously they were deeply in the red.

Figure 10 contains a comparison of SSA's macro-economic balances before the present crisis with the situation before the previous crises of 1983 and 1992. It shows that, before each of the previous crises, Africa had to cope with the "twin" deficits of both the fiscal and the current accounts being in deficit. These constraints meant that African countries generally had no leeway in previous economic slumps to use counter-cyclical fiscal and monetary policy – indeed, many had to adopt further austerity measures (lower spending, higher interest rates). Figure 10 shows that African economies are more resilient macro-economically this time, than they were in either of the previous downturns. It is particularly noticeable that the African countries' fiscal balances had substantially improved and that Africa has, in total, more than 10 times as much foreign reserve cover as during previous crises.

Figure 7. Current account balance of SSA countries, 1980-2007 (as per cent of GDP)



(Source of data: IMF, 2009a)

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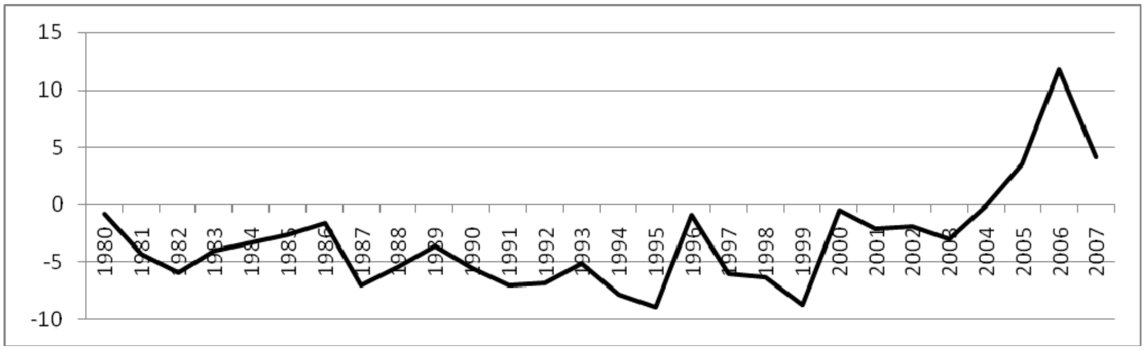
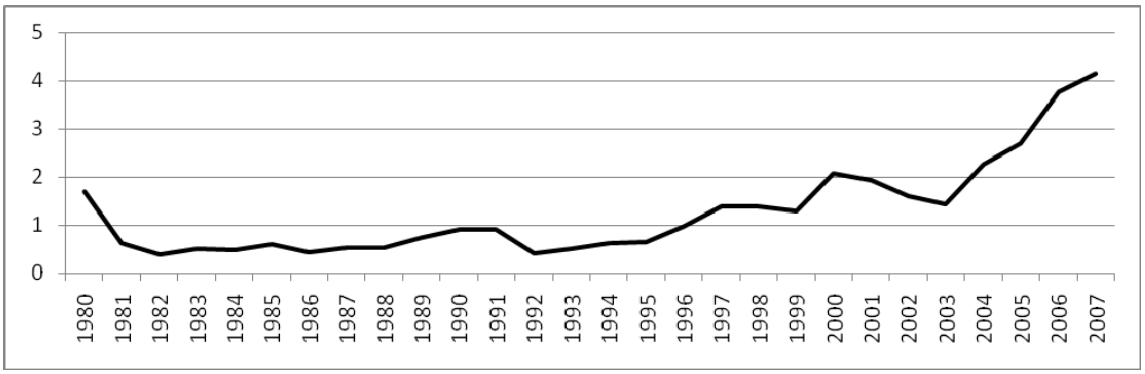
Figure 8. Fiscal balance of SSA countries, 1980-2007 (as per cent of GDP)



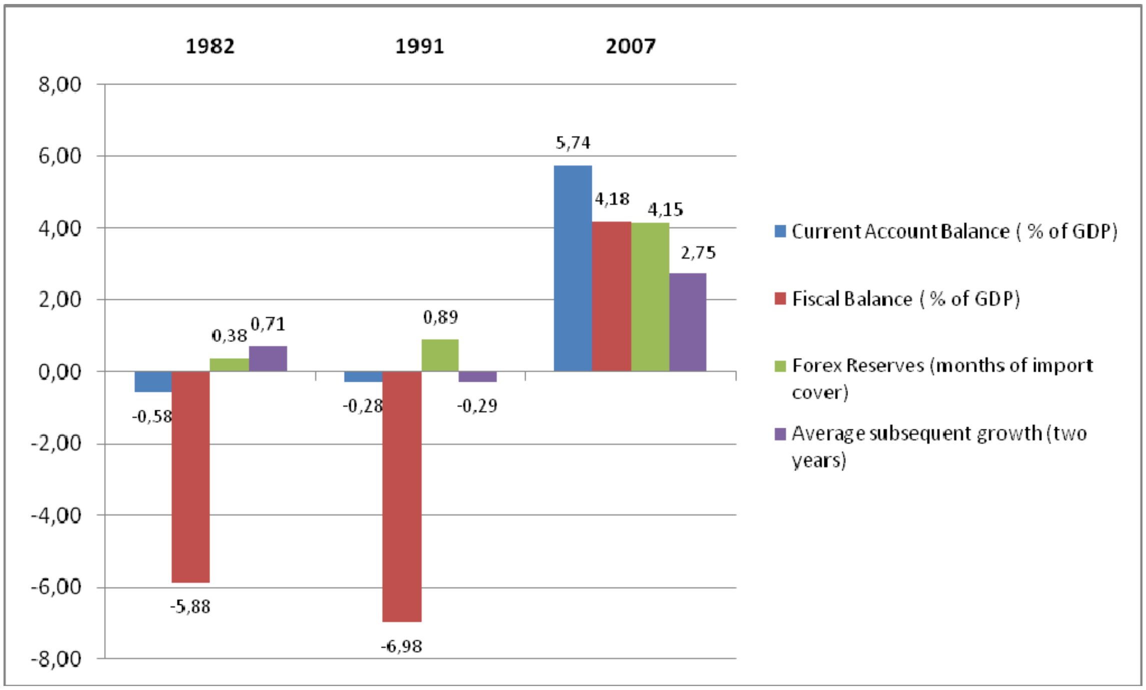
(Source of data: IMF, 2009a)

Figure 9. Forex reserves of SSA countries, 1980-2007 (as days of import cover)



(Source of data: IMF, 2009a)

Figure 10. Comparison of SSA macro-economic position to that before previous synchronised global recessions (2007 compared to 1982 and 1991)



(Note: Average subsequent growth for 2007 is the average of IMF's forecasts for 2009 and 2010 growth. Source of data: IMF, 2009 and World Bank Development Indicators Online)

4.2 Good Governance

The extent of a country or region's vulnerability to external shocks does not only depend on its macro-economic position. A strong macro-economic position is necessary, but not a sufficient condition for resilience. Resilience also depends on a government that has both the intention and the means to manage its macro-economic position in an appropriate manner to minimise the impact of the shocks on human development. Unless foreign exchange reserves and fiscal resources are used appropriately, the crisis can still wreak havoc in terms of unemployment, poverty and other indicators.

Most often, a government needs to take unpopular decisions during a recession, and be able to withstand popular discontent. Also, more participatory and transparent governments may be better able to determine the short-term needs of the population and where to target assistance. Therefore, countries with better governance (those which are less fragile) may be considered to be more resilient.

According to Briguglio *et al*., (2008:10):

> "Without mechanisms of this kind in place, it would be relatively easy for adverse shocks to result in economic and social chaos and unrest. Hence, the effects of vulnerability would be exacerbated. On the other hand, good governance can strengthen an economy's resilience."

The strength of *governance* can be measured – or more accurately proxied - by a country or region's achievement in terms of the Worldwide Governance Indicators (WGI) of the World Bank. The World Bank currently makes available governance indicators for 212 countries for the period 1996-2007, covering six aspects of governance, namely, voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption.[17]

Table 2 contains these global governance indicators for SSA, and compares them, for 2007, with the OECD, Latin America, Middle East and North Africa (MENA) and East Asia.

Table 2: Governance Indicators for five regions, 2007

	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption
East Asia	-0.03	0.34	-0.09	-0.18	0.15	-0.19
Latin America	0.12	-0.33	-0.24	-0.15	-0.52	-0.3
MENA	-0.88	-0.51	-0.21	-0.17	-0.04	-0.07
OECD	1.31	0.96	1.51	1.48	1.51	1.72
SSA	-0.55	-0.53	-0.77	-0.74	-0.75	-0.64

(Source: compiled from World Bank Worldwide Governance Indicators)

The scores in terms of a governance indicator can range from -2.5 (worst) to 2.5 (best). The scores contained in **Table 2** show that, in terms of all indicators, except for voice and accountability, Africa's governance performance is the worst of all regions. The comparison with the OECD is insightful, given that these countries are currently at the epicentre of the financial and economic crisis. It suggests that, from the perspective of governance, these countries will have greater resilience in buffering the impacts of the crisis.

In terms of short-term management/reaction to the financial and economic crisis, it may particularly be government effectiveness and regulatory quality that matters in terms of a government's being able to identify the correct measures for their economies to take, and to ensure strong regulation of banks, and financial systems in the implementation of recovery measures. Voice and accountability is also important, as this can act as a force on African governments to channel resources in the right direction in order to boost employment and alleviate poverty.

Political stability is also needed in times of crisis for governments to be able to focus on the problem. However, as can be seen from **Table 2**, political stability in Africa is low, and the continent has a history of political instability, in particular, civil strife and civil war. The substantial literature scrutinises the causes and consequences of civil war in Africa. A strong result in this literature is that the probability of political instability, and even the outbreak of civil war, is strongly associated with declines in GDP. Thus, the fear has been raised that the current financial and economic crisis, by suddenly and sharply reducing African growth rates, may foster instability and conflict.

Since the eruption of the crisis in October 2008, there has, indeed, been a number of cases of the flaring up of political violence in a number of African countries. These include Guinea, Guinea-Bissau, Lesotho, Madagascar and Mauritania.

Despite the improved economic growth and macro-economic position which Africa achieved in the recent past, it has not succeeded over time in significantly improving its scores in terms of governance indicators. The graphs in **Appendix D** plot changes in the six governance indicators in SSA and other regions between 1996 and 2007, and indicate the persistence in scores. This would strongly imply that lack of good governance remains a critical factor which will limit the resilience of African governments in the current crisis.

[17] See http://www.govindicators.org.

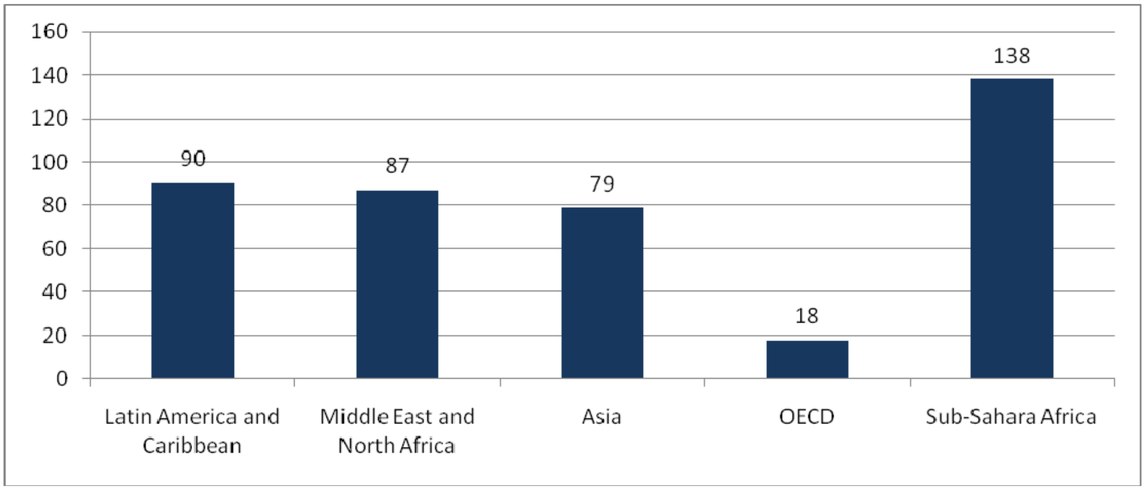
4.3 The Business Environment

An important part of the adjustment mechanism in the face of an external shock is a country's private business sector. Rising unemployment and less secure forms of employment, as is found in the informal sector, imply that entrepreneurship (broadly self-employment) should be seen as a potential useful coping mechanism. Indeed, promoting entrepreneurship and fostering a conducive environment for entrepreneurship is an explicit part of the European Commission's recommendations on strengthening Europe's resilience in the face of the current financial and economic crisis.

The World Bank makes available indicators to measure the "ease of doing business" for over 130 countries for the period 2003-2007.[18] These contain about 40 "Doing Business Indicators", covering aspects such as the start-up, running and closure of a firm. How does Africa fare in terms of the ease of doing business?

In terms of the overall ranking in the ease of doing business index, African countries have the lowest (worst) ranking of all regions, as **Figure 11** shows.

Figure 11: Average Rankings in terms of the Index of the Ease of Doing Business, 2007-2008



(Source: Author's calculations based on World Bank's Doing Business Data)

The rankings contained in **Figure 11** is based upon a number of indicators relating to a country or region's ease of doing business, consisting of:

- Starting a business;
- Dealing with construction permits;
- Employing workers;
- Registering property;
- Getting credit;
- Protecting investors;
- Paying taxes;
- Trading across borders;
- Infrastructure;
- Enforcing contracts;

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[18] See http://www.doingbusiness.org/.

- Closing a business.

In terms of the resilience to the financial and economic crisis, each one of these is generally important, although particular emphasis could be given to *starting a business*, *employing workers*, *getting credit and trading across borders*, given the expected consequences of the crisis in terms of reducing employment opportunities, reducing credit and reducing trade.

It is therefore useful to compare SSA with other regions in terms of these three (cost of starting a business, ease of employment, availability of credit, and cost of exporting).

Table 3 compares SSAs aggregate scores on these elements to that of other regions.

Table 3. Elements of the Ease of Doing Business, Comparing SSA to other Regions, 2007-2008

	Cost to export (US dollar per container)	Cost to start a business (% of GNI)	Difficulty of hiring index	Credit information index
East Asia & Pacific	902.3	32.3	19.2	2
Eastern Europe & Central Asia	1,649.10	8.6	36.4	4.1
Latin America & Caribbean	1,229.80	39.1	34.7	3.3
Middle East & North Africa	1,024.40	41	22.5	2.9
OECD	1,069.10	4.9	25.7	4.8
South Asia	1,339.10	31.9	22.2	2.1
Sub-Saharan Africa	1,878.80	111.2	39	1.4

(Source of data: World Bank Doing Business Indicators, http://www.doingbusiness.org/)

As **Table 3** indicates, the environment for doing business is the most difficult in SSA. For instance, the cost to export a container is at $1,878 the highest of any region. This suggests that the cost competitiveness of African exports is already under pressure. In countries in which this is high, resilience to find other markets or to retain some demand in the face of a global recession will be low. Similarly, it can be seen that it is relatively costly to start a new business firm in Africa. In fact, **Table 3** suggests that, in terms of the share of GNI, it may be almost three times as expensive to start a new business in Africa. Thus, with millions of people expected to lose their jobs in Africa over the next year or so, as a result of the global economic crisis (the ILO puts the number of additional unemployment at 3 million), their options of finding self-employment through business creation is likely to be much less, as a result of this high cost. Related to the cost of starting a new business is the fact that credit information systems are not as well-developed in Africa, so that prospective entrepreneurs may find it additionally hard to secure funding. Finally, it can also be seen that it is more difficult to hire people in SSA, which implies that, once the global crisis is past and firms start hiring again, the take-up rate in SSA may be slower.

4.4 Social Cohesion

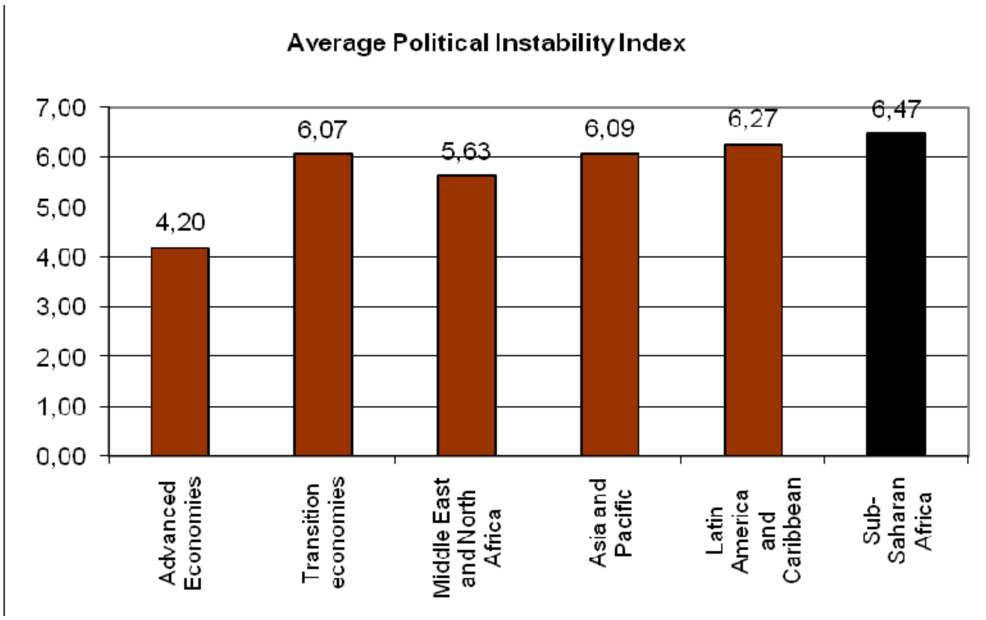
It has been argued that countries with higher degrees of social cohesion are more resilient (Briguglio *et al*., 2008). This is because such countries have mechanisms for channelling conflict about different policy objectives in a constructive manner. Where social cohesion is low, the danger is that an adverse external shock may push countries into debilitating conflicts, which will make the achievement of consensus around the required policies more difficult to achieve.

In the literature on Africa's economic development challenges, a substantial amount of the literature has dealt with the impact of African countries' comparatively low levels of social cohesion. The most widespread measures of social cohesion (or their lack) have been based upon ethnolinguistic fractionalisation (ELF) (see, for instance, Easterly and Levine, 1997; Alesina *et al*., 2003) and Posner (2004).

In this paper the measure of ethnolinguistic fractionalisation proposed by Posner (2004) will be used. His measure is called the "Politically Relevant Ethic Groups" (PREG) measure, and is based upon the extent to which different groups engage politically in a country. In sub-Section 5.4, the measure and its levels in the different SSA countries will be discussed.

Because this measure is only available for SSA countries, it cannot be used here in a comparative fashion. However, a related measure is that provided by the Economist Intelligence Unit in its "Political Instability Index", which is compiled using indicators such as ethnic fragmentation, the status of minorities, state history, inequality, trust in institutions, *etc*., (see Economist Intelligence Unit, 2009:15). This measure is available for a larger number of countries, and makes regional comparisons possible. **Figure 12** compares Africa with other regions in terms of this measure of social cohesion.

Figure 12: Political Instability Index for Africa and Other Regions, 2009



(Source: Compiled from data provided in the Economist Intelligence Unit, 2009:16; Note that the higher the index value, the higher the degree of political instability and the lower the degree of implied social cohesion)

Figure 12 shows that social cohesion in SSA is, in relative terms, the lowest of all the regions, with an average score of 6.47.

To summarise this section, it is clear that while Africa is not, perhaps, the most vulnerable region in the world (although its vulnerability *is* high), it is the least resilient region. The implication is that, even if its vulnerability is relatively lower, it may still find even such milder shocks more difficult to handle than, for instance, East Asia, which may be more exposed. Actions to help Africa through the crisis should, therefore, in particular also focus on building the short-term resilience of African countries.

In the next section, the concern will move from the aggregate African level to the level of the individual countries. The purpose will be to provide measures of vulnerability and resilience for the individual African countries, and identify which countries are most at risk from the global economic crisis.

5 The Indices of Vulnerability and Resilience for Sub-Saharan African Countries

5.1 Method

Having described the approach used in this paper to identify the needs and responses to the financial and economic crisis for Sub-Sahara Africa in Section 2, and having set out the measures of vulnerability and resilience with reference to the aggregate situation of SSA in Sections 3 and 4, this section will construct indices of vulnerability and resilience for 43 countries in Sub-Saharan Africa for which sufficient data is available.[19]

This will allow SSA countries to be categorised within a nine-cell matrix depending on whether they are low-, medium- or highly-vulnerable, and whether they have low, medium or high resilience. The vulnerability-resilience matrix is depicted in **Diagram 2**. It shows that, based upon the various combinations of vulnerability and resilience, an identification can be made of *countries most at risk, countries at high risk, countries at medium risk, countries at low risk,* and *countries least at risk*.

Diagram 2. Vulnerability-Resilience Matrix

Degree of Vulnerability

Countries most at risk	Countries at high risk	Countries at medium risk
Countries at high risk	Countries at medium risk	Countries at low risk
Countries at medium risk	Countries at low risk	Countries at least risk

Degree of Resilience

(Source: Author)

19 The countries for which data is insufficient to construct the various indices are Djibouti, Mauritania, Somalia, the Sudan, and Zimbabwe.

5.2 Financial and Trade Vulnerability of Sub-Saharan African Countries

As a first step to identify the countries most at risk from the crisis, an index of overall financial- and trade-vulnerability was constructed. Following the explanation in Section 3, this index consists of six components, namely:

- The share of exports in GDP (%);
- External debt as a percentage of GDP;
- Export concentration as measured by UNCTAD's export concentration index;
- Regulatory capital to risk-weighted assets (%);
- Cross-border liabilities to BIS reporting banks in billion of dollars;
- Share of credit to the private sector as a percentage of GDP.

In each of these components, countries were first ranked from 1 to 43, in which a low rank (for example, 1) would indicate low vulnerability, and a high rank (for example, 43) would indicate high vulnerability. Then, the average ranking for countries would be obtained, in terms of which countries would be ranked from the lowest average vulnerability (1) to the highest degree of average vulnerability (43). Within this ranking, countries were divided into roughly three equal groups in order from low to high, and assigned into either the low-, medium- or high-vulnerability category.

In **Appendix E**, two measures of financial-vulnerability and two measures of trade-vulnerability are shown for the sample of African countries, as way of illustration.

Diagram 3 contains the overall financial- and trade-vulnerability ranking for the individual African countries.

Diagram 3. Overall Financial- and Trade-Vulnerability Ranking for African Countries

Overall Vulnerability Rank

Low		Medium		High	
Sierra Leone	1	Chad	15	Burundi	30
Comoros	2	Guinea-Bissau	16	Mozambique	31
Uganda	3	Togo	17	Gabon	32
Rwanda	4	Lesotho	18	South Africa	33
Central African Republic	5	Tanzania	19	Nigeria	34
Ethiopia	6	Botswana	20	Angola	35
Benin	7	Guinea	21	Mali	36
Equatorial Guinea	8	Burkina Faso	22	Mauritius	37
Eritrea	9	Kenya	23	Ghana	38
Madagascar	10	Senegal	24	Cape Verde	39
Niger	11	Swaziland	25	Côte d'Ivoire	40
Malawi	12	Namibia	26	Congo, Dem. Rep. of	41
Congo, Rep. of	13	São Tomé and Príncipe	27	Liberia	42
Gambia, The	14	Cameroon	28	Seychelles, The	43
		Zambia	29		

(Source: Author's calculations based upon various sources of data)

5.3 The Resilience of Sub-Saharan African Countries

Having identified the vulnerability of the various African countries to the financial and economic crisis, the next step is to match these degrees of vulnerability with the degrees of resilience of each economy. Thus, while some economies (for example, Mauritius) may be highly vulnerable, they may also be more, or less, resilient, which will have an impact on the extent to which they are at risk from the crisis, and how quickly they will recover.

As explained earlier (see D**iagram 2**), resilience is determined by:

- Macro-economic management, which is measured here by:
  - The fiscal resource balance, as percentage of GDP;
  - The external balance, measured as the current account balance percentage of GDP;
  - The extent of foreign exchange reserves in terms of months of import cover.
- The extent of good governance, measured here by:
  - The degree of political stability;
  - The degree of government effectiveness;
  - The extent to which corruption can be controlled.
- The extent to which the business environment is conducive to new and existing business growth, measured here by:
  - The overall ranking of a country on the ease of doing business index;
  - The cost of exporting per container in US $;
  - The cost of starting up a new business in terms of percentage of GNI.
- Social cohesion, which is measured here by:
  - The degree of ethnolinguistic fractionalisation;
  - The political instability index.

As in the case of the overall vulnerability index, the overall resilience index is calculated as the simple average of each country's ranking in terms of the above 11 components. Countries were ranked in terms of 1–43, from low resilience (rank 1) to high resilience (rank 43). Again, countries are divided into three groups based upon their ranking: low, medium and high resilience.

Appendix F contains as an illustration four of the components of the resilience index.

Diagram 4 contains the overall resilience ranking for the African countries.

Diagram 4. Overall Resilience Ranking for African Countries

Overall Resilience Rank

Low		**Medium**		**High**	
Congo, Dem. Rep. of	1	Ethiopia	16	Burkina Faso	31
Chad	3	Sierra Leone	17	Togo	32
Burundi	4	Zambia	18	Madagascar	33
Central African Republic	5	Malawi	19	Benin	34
Eritrea	6	São Tomé and Príncipe	20	Tanzania	35
Congo, Rep. of	7	Cameroon	21	Mozambique	36
Guinea-Bissau	8	Mali	22	Lesotho	37
Côte d'Ivoire	9	Uganda	23	Swaziland	38
Guinea	10	Nigeria	24	Seychelles, The	39
Niger	11	Ghana	25	Gabon	40
Kenya	12	Senegal	26	Namibia	41
Liberia	13	Cape Verde	27	South Africa	42
Angola	14	Rwanda	28	Mauritius	43
Comoros	15	Equatorial Guinea	29	Botswana	44
		Gambia, The	30		

(Source: Author's calculations based on various sources of data)

5.4 Position in terms of the Vulnerability-Resilience Matrix

The final step in identifying the African countries most at risk from the global economic crisis is to compare individual countries' vulnerability ranking with their resilience ranking. There are nine combinations corresponding to the cells in **Diagram 2**. Thus for instance countries with low vulnerability and low resilience are at medium risk; as their resilience improves, so does their risk decline, to the category of countries with low vulnerability and high resilience which are considered to be the least at risk. On the other side of the spectrum are countries with high vulnerability and low resilience. These are countries most at risk. As highly vulnerable countries' resilience improve however, the measure to which they are at risk decline, so that countries with high resilience and high vulnerability may only be at medium risk. Countries with intermediate levels of resilience and vulnerability are deemed to be at medium risk.

Based on these categories and their rankings in terms of the vulnerability and resilience indices constructed in the previous two sub-sections, Diagram 5 categorizes each African country in terms of the vulnerability-resilience matrix.

Diagram 5: Vulnerability-Resilience Matrix for African Countries at Risk from the Global Economic Crisis

Most at risk **Congo, Dem. Rep. of** **Burundi** **Côte d'Ivoire** **Liberia** **Angola** **Sudan**	**High risk** **Mali** **Nigeria** **Ghana** **Cape Verde** **Mauritania**	**Medium risk** Mozambique Seychelles, The Gabon South Africa Mauritius
High risk **Chad** **Guinea-Bissau** **Guinea** **Zimbabwe** **Somalia** **Kenya**	**Medium risk** Zambia São Tomé and Príncipe Cameroon Senegal Djibouti	**Low risk** Burkina Faso Togo Tanzania Lesotho Swaziland Namibia Botswana
Medium risk Central African Republic Eritrea Congo, Rep. of Niger Comoros	**Low risk** Ethiopia Sierra Leone Malawi Uganda Rwanda Equatorial Guinea Gambia, The	**Least risk** Madagascar Benin

(Source: Author's calculations)

5.5 Comparisons and Assessment

As shown in **Diagram 5**, the African countries most at risk are the Democratic Republic of the Congo, Burundi, Côte D'Ivoire, Liberia, Angola and Sudan.

Also at high risk are Chad, Guinea-Bissau, Guinea, Zimbabwe, Somalia, Kenya, Mali, Nigeria, Ghana, Cape Verde and Mauritania.

Other countries with noted high vulnerability, such as Mauritius, South Africa, Gabon, the Seychelles and Mozambique are only at medium risk, due to their better resilience as measured here.

Most (although not all) of the African countries most at risk or at high risk are so-called "fragile states". A fragile state can be defined as a state that "cannot provide the basic functions of governance to its population" (CIFP,2006:3). The World Bank describes low-income countries "under stress" (LICUS) as "fragile states". These are low-income countries with a score of 3.0 or less in terms of its Country Policy and Institutional Assessment (CPIA) ratings.

According to the World Bank,the "severe" fragile states of the SSA in 2006 were the Central African Republic, Comoros, Liberia, Somalia and Zimbabwe, with the "core" fragile states being Angola, Burundi, Congo, Democratic Republic of Congo, Côte D'Ivoire, Eritrea, Guinea, Guinea-Bissau, Nigeria, the Sudan and Togo. Comparing this list to the countries most at risk and at high risk from the global economic crisis, it is clear that only Cape Verde, Ghana, Kenya and Mauritania are non-fragile states in Africa, that is to say, at high or most serious risk in Africa.

This suggests not only that it is mainly Africa's fragile states, which are most at risk, but also that important, large, regional economies, such as Ghana and Kenya, are also at risk.

As an illustration of the usefulness of correctly defining vulnerability and considering resilience, one can compare the countries identified here as being most at risk, with existing predictions of the impact of the global economic crisis on individual African countries. Such predictions have been made by the IMF, the World Bank and the African Development Bank.

Table 4 below summarises the predictions of the impact of the crisis on GDP growth in Africa of the IMF and World Bank.

Table 4. Predicted Impact of the Global Economic Crisis on GDP growth of African Countries, IMF and World Bank (difference between 2009 and 2007)

Forecasted growth declines, SSA 2007-2009		
Degree of decline	**SSA countries according to World Bank (November 2008)**	**SSA countries according to the IMF (April 2009)**
Very high	Angola, the Seychelles, Ethiopia, Kenya, Uganda, South Africa, Botswana, the Gambia	Equatorial Guinea, Angola, the Seychelles, Botswana, Madagascar, South Africa, Cape Verde, Ethiopa, Gabon, Namibia, Liberia, Lesotho
High	Malawi, Lesotho, Mauritius, Zambia, Cape Verde, Swaziland, Sierra Leone, Gabon	Kenya, DRC, Nigeria, Swaziland, Mozambique, Uganda, the Gambia, Rwanda, Zambia, Senegal, Mauritius, Tanzania
Moderate	Rwanda, Ghana, Tanzania, Mozambique, Namibia, Nigeria, Comoros, Madagascar	Sierra Leone, Malawi, Ghana, CAR, Cameroon, São Tomé, Benin, Guinea-Bissau, Mali, Niger, Eritrea, Togo, Burkina Faso, Burundi
Positive	Guinea-Bissau, Togo, Senegal, Benin, Central African Republic, Niger, Burundi, Cameroon, Eritrea, Mali, Burkina Faso, Cote D'Ivoire, Guinea, DRC, Chad, Zimbabwe, Congo	Comoros, Guinea, Cote d'Ívoire, Chad, Congo

(Source: Author, based upon IMF (2009) and World Bank (2008) forecasts

From Table 4, it can be seen that the IMF and the World Bank's forecasts imply that some countries would escape a negative impact from the crisis, such as Burundi, Côte D'Ivoire and Zimbabwe, which, in the present analysis, have been identified as being highly at risk. More in line with the present analysis, the forecasts also implies that Liberia and Angola are highly at risk. South Africa, Botswana, Gabon and Mauritius are also identified - by implication - by these institutions as at high risk, although, in the present analysis, the resilience of these countries is seen as a factor which may mitigate the impact.

A further comparison is with the African Development Bank (AfDB, 2009b), which classified African countries as being more or less *vulnerable* (bearing in mind the earlier criticism that the AfDB measurement of vulnerability refers more to outcomes in terms of resilience). This is done in **Table 5.**

Table 5. Countries at Risk and Vulnerability Assessment

Degree of being at Risk	SSA Countries according to the present framework	Degree of Vulnerability	SSA Countries according to the African Development Bank*
Countries most at risk	Burundi, Congo (DR), Côte D'Ivoire, Liberia, Angola, the Sudan, Zimbabwe	Very high	Burundi, Eritrea, Madagascar, Niger, Senegal, the Sudan, Togo
Countries at high risk	Chad, Guinea-Bissau, Zimbabwe, Somalia, Mali, Nigeria, Ghana, Cape Verde, Mauritania, Kenya.	High	Angola, Central African Republic, Congo (DR), Côte D'Ivoire, the Gambia, Kenya, Lesotho, Liberia, Malawi, Nigeria, Rwanda, São Tomé & Principe, Sierra Leone, Zambia
Countries at medium risk	Central African Republic, Eritrea, Congo, Niger, Comoros, Zambia, São Tomé and Principe, Cameroon, Senegal, Mozambique, the Seychelles, Gabon, South Africa, Mauritius	Moderate	Benin, Burkina Faso, Cape Verde, Chad, Djibouti, Ethiopia, Ghana, Guinea-Bissau, Mauritania, Mauritius, the Seychelles, Tanzania, Zimbabwe
Countries at low risk	Ethiopia, Sierra Leone, Malawi, Uganda, Rwanda, Equatorial Guinea, the Gambia, Burkina-Faso, Togo, Tanzania, Lesotho, Swaziland, Namibia, Botswana	Low	Uganda, Cameroon, Swaziland, Equatorial Guinea
Countries at least risk	Madagascar, Benin	Very low	Botswana, Gabon, Namibia

Note: *The AfDB does not classify South Africa.

Here, one can again see some similarities in that some of Africa's fragile states top the lists in terms of being "highly vulnerable" or at high risk, such as Burundi, Angola, Liberia, the Sudan, and the Democratic Republic of Congo. But there are also important differences, such as the very low vulnerability which the AfDB affords to Botswana and Gabon, and that it only sees Cape Verde, Ghana, Burkina Faso, Mauritius, the Seychelles and Zimbabwe as "moderately vulnerable".

6 Responding to the Crisis: Mitigation, Coping and Risk Reduction

From the analysis in this paper the following conclusions can be made regarding the way forward for SSA countries.

- First, SSA is the world's developing region most at risk.
- Second, not all countries will be equally at risk. Those most at risk include most of Africa's fragile states, as well as a few larger regional economies.
- Third, SSA countries are generally more resilient in terms of macro-economic management now, than in previous globally-synchronized recessions.
- Fourth, globally co-ordinated responses, regional responses and country efforts to extricate SSA from the crisis will need to focus on: (a) mitigation; (b) coping; and (c) risk reduction. Here, (a) and (b) are short- and medium-term actions, and (c) more long-term strategy.
- Five, the duration of this crisis is a vital, but currently unknown, variable which will affect the extent to which SSA is at risk. A recovery in the advanced economies sooner, rather than later, is an imperative. It is therefore important for SSA development and growth that measures towards stimulating Western economies and re-establishing confidence in Western-based banks are successful.

- Six, at the heart of the crisis for SSA countries is the loss in export markets and the resulting reduction in foreign exchange receipts. Over the short-term, crisis mitigation should prioritize actions to address the deterioration of SSA trade and foreign currency inflows.
- Seven, the major fear is that the crisis, even if short-term, will leave long-term scars on African society through impacting on poverty and causing adverse conditions for coping. There is, therefore, urgency in extending social safety frameworks throughout SSA, and mobilising governmental, regional and donor financial support for this. The fast-tracking of aid disbursements will be vital.
- Eight, it is clear from the nature of the current crisis that SSA is at risk, and will remain at risk from future perturbations in the global economy, due to weaknesses in the global financial architecture.

The main recommendations for mitigation, coping and risk-reduction are summarised in **Table 6**. A detailed unpacking of each of these action plans and strategies falls outside the scope of this study. However, in future weeks and months, during and after the UN "Conference at the Highest Level on the World Financial and Economic Crisis and its Impact on Development" (New York, 1-3 June 2009), effort should focus on the appropriate actions to be taken in this regard in each country, according to its own specific challenges in terms of vulnerability and resilience.

7 Concluding Remarks

The socio-economic challenges facing Sub-Saharan Africa (SSA) is well-known. Below the headlines of conflict, corruption, disasters and disease, the statistics point to a region struggling to attain and maintain adequate living standards for its people. It is the world's poorest continent.

There is no single cause of Africa's woes. Many explanations have been forwarded (see, for example, Ndulu *et al*., 2007a). These have been concerned with both long-term[1] and shorter-term determinants.[2] Common to these is the idea of a low-income "poverty trap" in which low investment, low productivity and low growth are perpetuated by various factors.[3] Given the centrality of inadequate investment, productivity and growth, the SSA post-independence record shows that there was initially good investment and growth, but that growth declined during the 1980s.[4]

Thus, between 1961 and 1975, SSA experienced average annual GDP growth of 4.5 per cent, which declined to 2.1 per cent over the next ten years – the lowest of any region and lower than population growth rates. Following the end of the Cold War, the mid- to late-1990s saw something of a consolidation in many African economies with progress in terms of economic and political reforms. Average annual GDP growth between 1995 and 1999 was up to 3.4 per cent.[5] At the start of the Twenty-first century, many African countries were - after two or more decades - beginning to register more respectable growth rates. Supported by a buoyant world economy and favourable prices for its commodities,[6] continent-wide economic growth rates between 2003 and 2006 accelerated to an average of 8.1 per cent – after East Asia and the Pacific the highest of any region. Optimism that Africa was finally starting to recover was catching on.

Then cracks started to appear in the world economy. Optimism in the sustainability of African growth was seriously dented – first, by the peak in fuel prices in July 2008, which was especially bad news for fuel importers, and then, in September 2008, by the

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1 Bolt and Bezemer (2009) summarises four main "long-run/term" explanations for African development. These are "extractive colonial institutions" including the slave trade, the impact of different colonial legal frameworks, the impact on human capital during the colonial era, and geography. In addition to these, the degree of pre-colonial centralisation has also been noted to have influenced long-term development patterns (see Gennaioli and Rainer, 2007). The relative importance of "colonial" (institutional) *versus* geography explanations in the literature has been described as "a competition between geography and institutions" (Warner, 2002: 1). See, also, Naudé (2004) and Naudé and Krugell (2007).

2 Over the shorter-term (*i.e.*, essential post-independence) Ndulu *et al*., (2007b) explains Africa's challenges being due to a combination of four policy "syndromes": state controls, adverse redistribution, intertemporally unsustainable spending, and state breakdown (see, also, Fosu, 2007 for a discussion).

3 Collier (2006a) discusses four factors keeping Africa in a low-income poverty trap, such as conflict, the corruption trap, the dependence on primary commodities, and a fractionalised society. Birdsall (2007) describes inadequate institutions (an institutional trap) as a factor.

4 According to Collier and O'Connell (2007), African GDP *per capita* diverged from the rest of the world at an average annual rate of 5 per cent between 1980 and 2000.

5 An important feature of SSA's growth is its high volatility. According to Fosu (2007:2) SSA's standard deviation of GDP is the highest of all regions. Arbache and Page (2007; 2008) points out that this reflects that African economies have experienced both growth accelerations as well as growth decelerations (including "growth collapses") over this period.

6 Between January 2003 and July 2008 energy, food and metal price indices rose respectively by 329, 102 and 230 per cent (IMF, 2009). It is important to note that there is significant difference in economic performance between Africa's oil exporters (for example, Angola, Nigeria, Equatorial Guinea) and oil importers. For instance, between 2003 and 2006, oil exporters economic growth averaged 10.1 per cent compared to the growth of oil imports of 6.8 per cent.

bursting of the "greatest credit bubble in history"[7] - the financial crisis which originated in the US.

In early December 2008, the National Bureau of Economic Research (NBER) confirmed that the US economy was in recession, and, a week later, estimates were released showing that the UK economy was also contracting. Soon, it became clear that other Member States of the EU, such as France, Germany, Ireland and Sweden, amongst others, and other major markets, such as Japan and Singapore, were also in recession.

Initially, many had hoped that African countries might be spared the fallout from the crisis based on three beliefs:

- First, that the crisis had its origin in the US's financial sector, while African banks had limited exposure to US-originated securities;
- Second, that the initial expansionary fiscal and monetary policies implemented by the US and European governments would sufficiently stimulate their economies to prevent a slump in demand and a decline in aid to Africa; and
- Three, that there might have been some de-coupling of the dependency of African growth rates on US and European growth rates, given the expansion of trade between Africa and Asia in recent years.

By the end of the first quarter of 2009, there was growing awareness that these hopes might have been too optimistic. For one, as discussed in this paper, it started to appear that Africa's financial markets would not escape unharmed. The effect of the crisis on Africa's financial markets is more subtle, and perhaps more long-term, as has been argued here, although short-term vigilance (and willingness and ability to act) on the part of the SSA's banking sector is still required.

Also, despite the US, the states of the EU and other countries having adopted financial sector bailout programmes and fiscal and monetary stimulus packages as early as November 2008, by the end of the first quarter of 2009, their economies had failed to respond. For instance, between October and December 2008 approximately $ 2 trillion was allocated towards financial sector bailouts (for example, in the form of bank recapitalisations and guarantees), approximately $ 800 billion for fiscal expansion (in the UK, the EU and also China and India) and interest rates were cut significantly by the European Central Bank, the Federal Reserve Bank, the Bank of England, and central banks in Canada, China, Denmark, Japan, Sweden and South Korea - in many cases, to their lowest level in 50 years. In spite of these cuts, growth prospects continued to worsen,[8] and, along with it, the demand for exports from countries such as Africa, to such an extent that IMF forecasts published in April 2009 predicted a fall in global trade during 2009 of 11 per cent – a significant downward revision from their October 2008 estimate of a decline of 2.8 per cent. Simultaneously, the worldwide gap in trade finance had grown from an initial estimate of $ 25 billion in November 2008 to $ 100 billion by March 2009. The eventual success of these measures, and the reversal in the contraction of world trade, are ultimately going to determine just how much SSA is at risk, and how far the development progress of recent years will be thrown back. In the meantime, SSA must cope by preventing households from sliding into poverty and engaging in coping with adversity through their own fiscal and monetary stimulus packages, where the scope exists.

At the same time that bailout and stimulus plans have failed to stem the decline in world trade and trade finance, fears started to grow that foreign aid (Official Develop-

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[7] See Morris (2008), who discusses the origins of the financial crisis and who notes that: "It is impossible to exaggerate the sheer idiocy of the financial machinery of the 2000s." (p.xvii).

[8] According to Taylor (2009), the pumping in of liquidity into global markets is based on a misdiagnosis and that the crisis is one of counterparty risk rather than a shortage of liquidity. As such, he argues that "government actions and interventions caused, prolonged and worsened the financial crisis" (p.27).

ment Assistance – ODA) to African countries might decline. The US President suggested in March 2009 that his administration might not achieve its target of doubling foreign aid.[9] Other countries such as Ireland, Italy and Latvia decreased their aid budgets,[10] and the value of aid from the UK has been substantially reduced – by up to $ 41 billion over the next seven years - due to the shrinking of the UK economy and the depreciation of the British Pound. Given that aid has always tended to decline in the past during recessions, it may, therefore, not be unreasonable to expect further declines – even if this runs contrary to the commitments made by advanced countries at the International Conference on Financing for Development in Doha in December 2008. Maintaining aid commitments, and accelerating these is, however, vital especially to enable the SSAs fragile states to cope with the current crisis.

Third, hopes that African countries might avoid the worst of the financial and economic crisis in the West due to de-coupling of growth rates have also turned out to be overly optimistic. African growth rates and expected future growth rates came tumbling down with amazing speed after the crisis erupted in September 2008. And where there was some hope that Africa's stronger trade and investment ties with China and India might have provided some protection, these were dashed as it became clear that these economies would also be negatively affected by the crisis. Both China and India's growth performance decelerated to the extent that both adopted fiscal stimulus packages by the end of 2008. Moreover, by January 2009, it had become clear that China's year-on-year exports had declined by 18 per cent in value. As the demand for China's products decline (its major export markets are the US and EU), so does its demand for African exports. The need for SSA to restructure its exports (over the long-term) is vital for SSA to reduce its vulnerability to external shocks. At the same time, reform of the international financial architecture is needed to ensure adequate and just international insurance mechanisms in times of short-term crises.

Much has been written elsewhere about the reform of the international financial architecture. For present purposes, though, it should be noted that there is a responsibility on the G-20 countries to ensure that the process and prospects for such reform is not undermined by short-term actions to pull their own economies out of recession. Consider, for instance, that the most recent G-20 meeting, on 2 April 2009 in London, did not seriously set in motion the reform of the IMF and the World Bank, and failed to address the issue of the dollar (and related global imbalances in trade).

Indeed, at the G-20 summit, the main thrust was on short-term measures, including bank bail-outs, to stabilise the US and European battered banking systems. These measures are not popular, neither in the US nor in developing countries. As Kofi Annan recently wrote in this regard:

> "'…the very way in which the developed world has responded to the crisis continues to worsen their situation by encouraging capital to flee to perceived safety."

This has also been referred to as "financial protectionism", whereby the US, as issuer of the world's reserve currency, can pump sufficient money into its banking sector to guarantee its stability, thereby attracting funds from other countries without this ability. Damaging developing countries' access to capital, this comes at the expense of US taxpayers. As Joseph Stiglitz recently wrote in the New York Times:

> "What the Obama administration is doing is far worse than nationalisation: it is *ersatz* capitalism, the privatising of gains and the socialising of losses. It is a 'part-

9 See "Foreign Aid Suffers as Financial Crisis Persists" at: http://news.medill.northwestern.edu/washington/news.aspx?id=125801

10 Ireland reduced its aid budget by 10 per cent (€95 million), Italy by 65 per cent and Latvia by 100 per cent (see "Less and Worse Aid" at: http://www.eurodad.org/whatsnew/articles.aspx?id=3285).

> nership' in which one partner robs the other. And such partnerships — with the private sector in control — have perverse incentives, worse even than the ones that got us into the mess."

It may be no surprise that a recent survey in the US found that 51 per cent of Americans want to see an end to bailout money for banks.

Only about $ 50 billion of the G-20's commitments has been directly allocated for the "poorest" developing countries. While substantial (it is about half of Africa's estimated output loss in 2009), it may paradoxically come to be seen in time as to have been inadequate and inequitable. Many have already remarked on the fact that huge amounts of money have been found at short notice to bail out banks, but that money to bail out the world's bottom billion is always in short supply.

The current global economic crisis, and the way it has been handled over the short-term by the advanced countries, and, due to its fundamental origin in global imbalances, may very well contribute towards a paradigm shift in global development. Many, therefore, see the current crisis as the opportunity to take such change forward.

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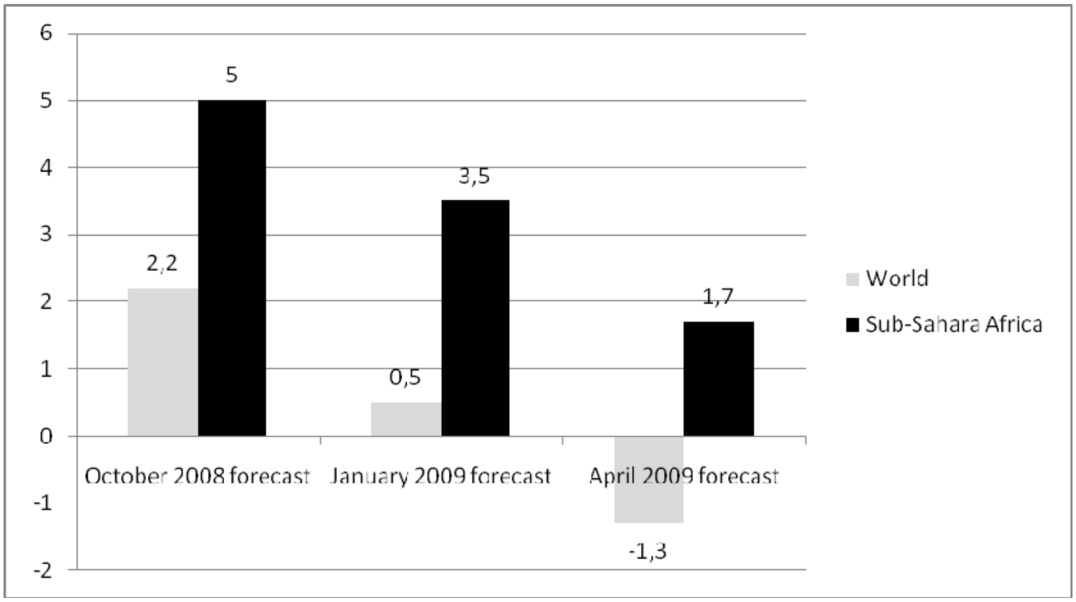
9 Appendices

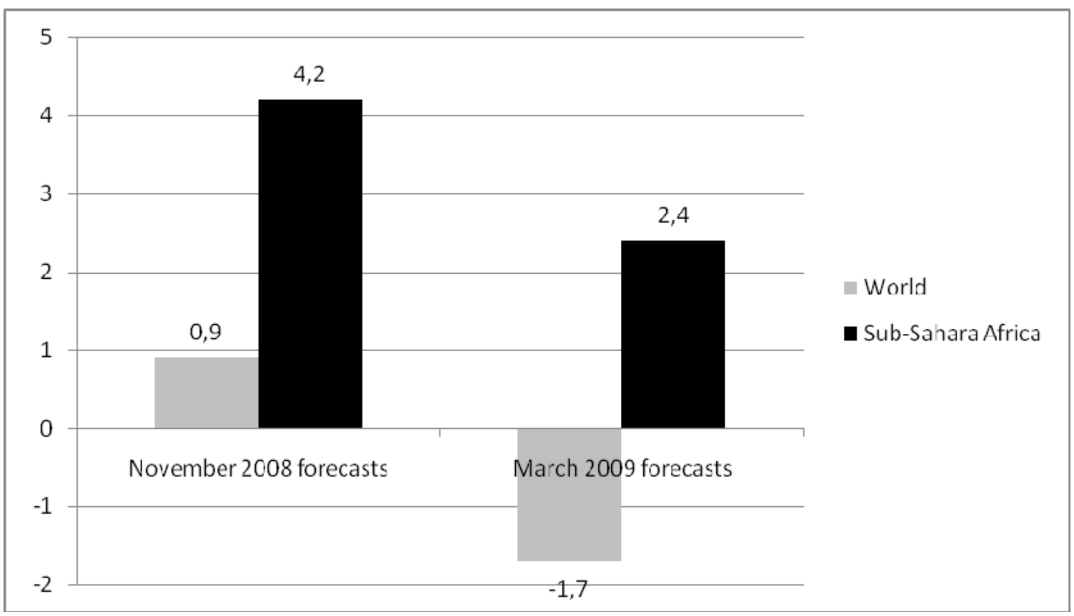
9.1 Appendix A: Growth Forecasts for Africa and the World Economy for 2009

Figure A1. IMF Growth Forecasts for Africa and the World Economy for 2009, % change



(Source: Author's compilation based on IMF World Economic Outlook Projections)

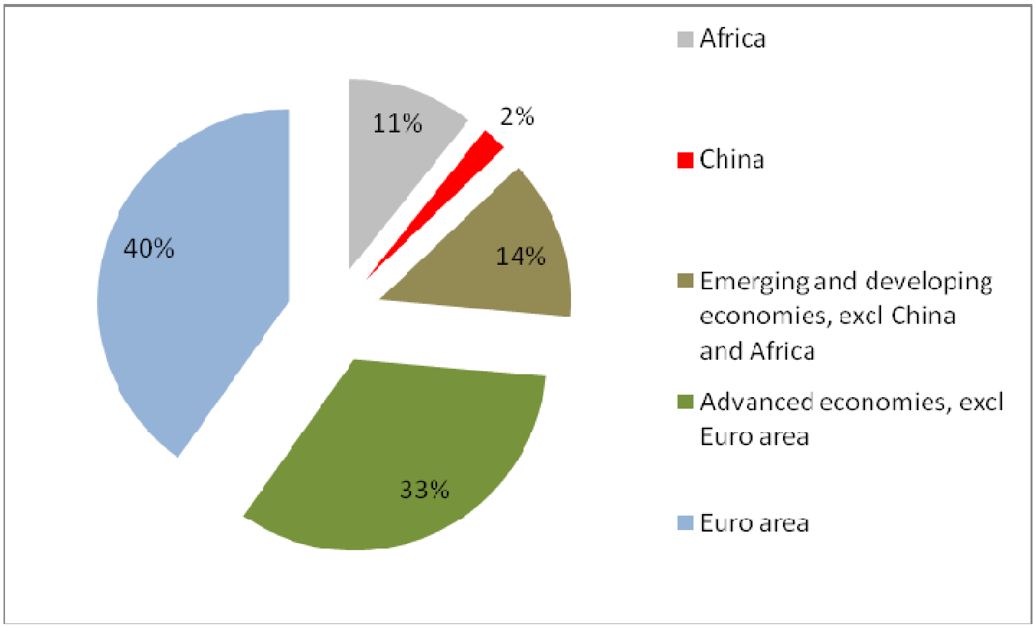
Figure A2. World Bank Growth Forecasts for Africa and the World Economy for 2009, % change



(Source: Author's compilation based on World Bank Global Economic Prospects 2009 Projections)

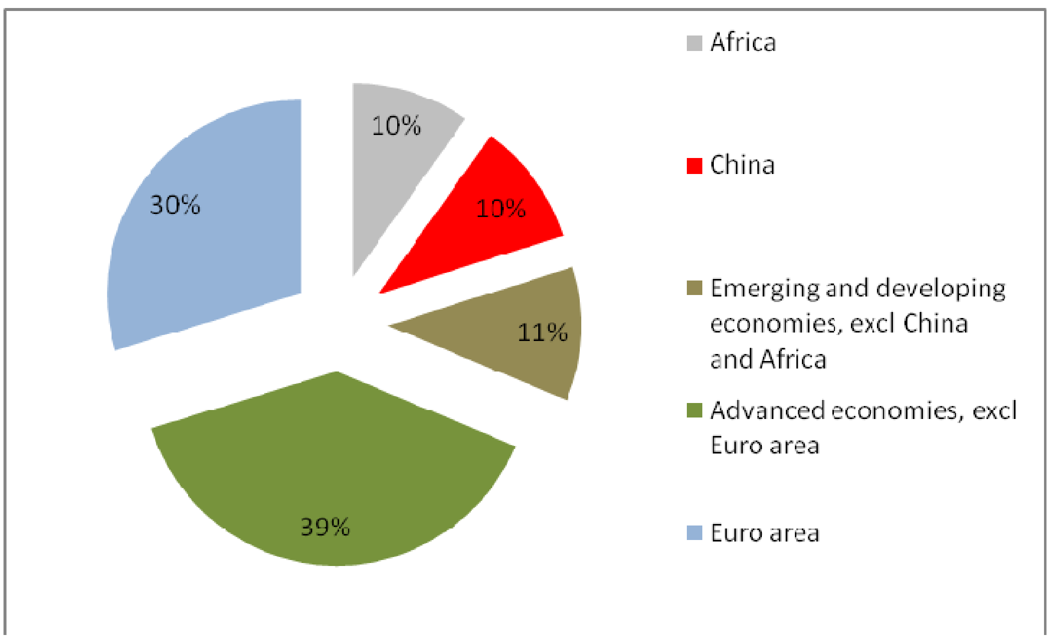
9.2 Appendix B: Direction of Africa's Exports, 1999 and 2007 (%)

Figure B1: Direction of Africa's Exports in 1999 (%)



(Source: Author's calculations based on IMF Direction of Trade Statistics Data)

Figure B2: Direction of Africa's exports in 2007 (%)



(Source: Author's calculations based on IMF Direction of Trade Statistics Data)

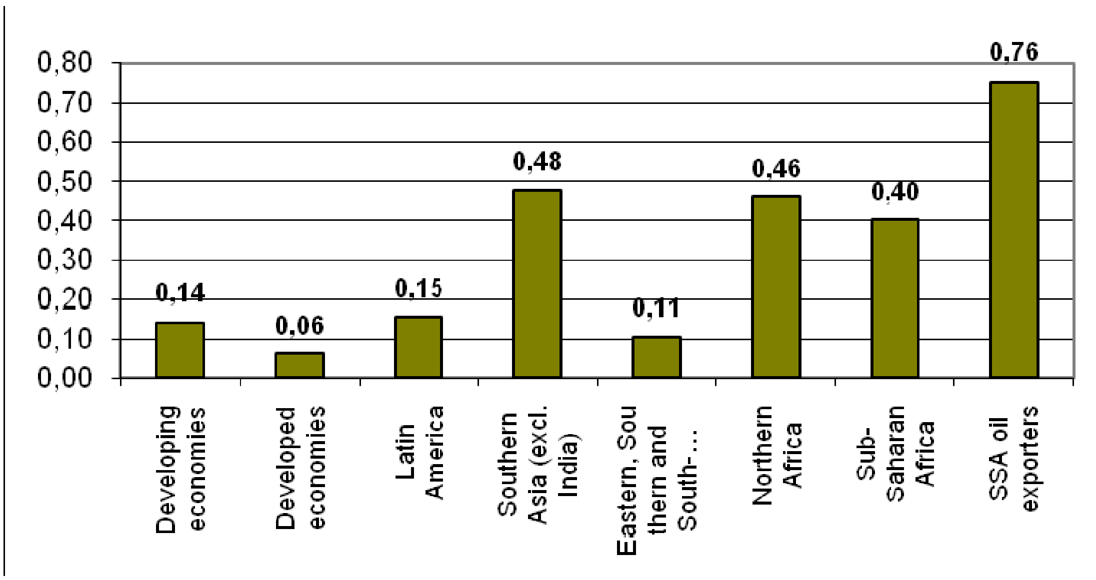
9.3 Appendix C: Export Concentration in Africa compared to other Regions, 2006

Table C1. Number of Export Products and Export Concentration Index of Africa in Comparison, 2006

Region	Number of export products	Export concentration index*
Developing economies	260	0.14
Developed economies	260	0.06
Latin America	256	0.15
Southern Asia (excl. India)	249	0.48
Eastern, Southern and South-Eastern Asia	260	0.11
Northern Africa	244	0.46
Sub-Saharan Africa	259	0.40
Major petroleum exporters: Africa	221	0.76

(Source: compiled from UNCTAD's export concentration index, where 1 is maximum concentration)

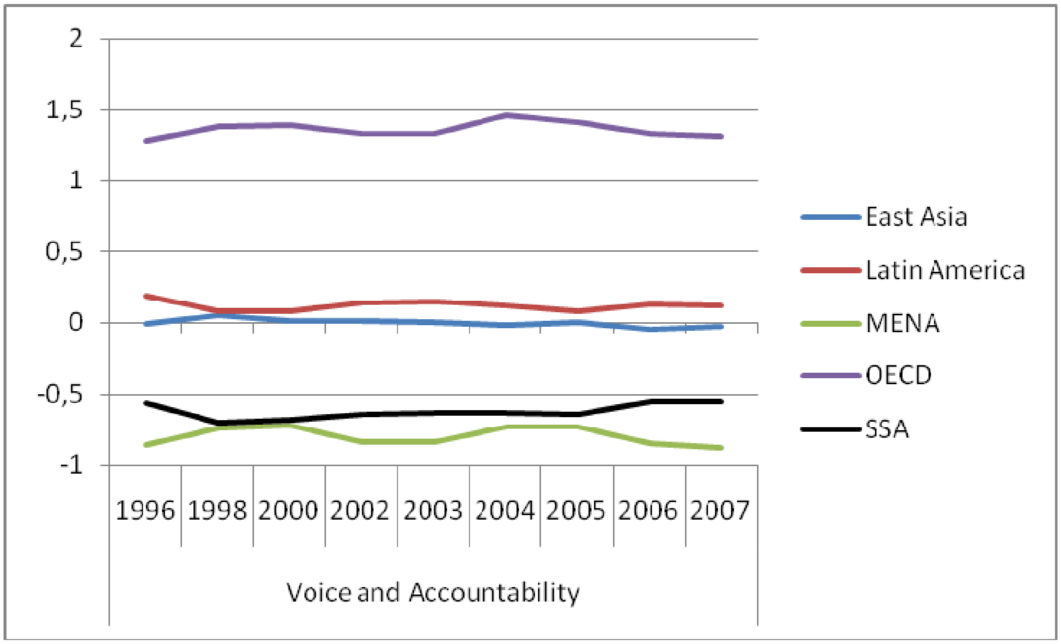
Figure C1. Export Concentration Index, Comparing Africa with other Regions, 2006



(Source: compiled from UNCTAD's export concentration index, where 1 is maximum concentration)

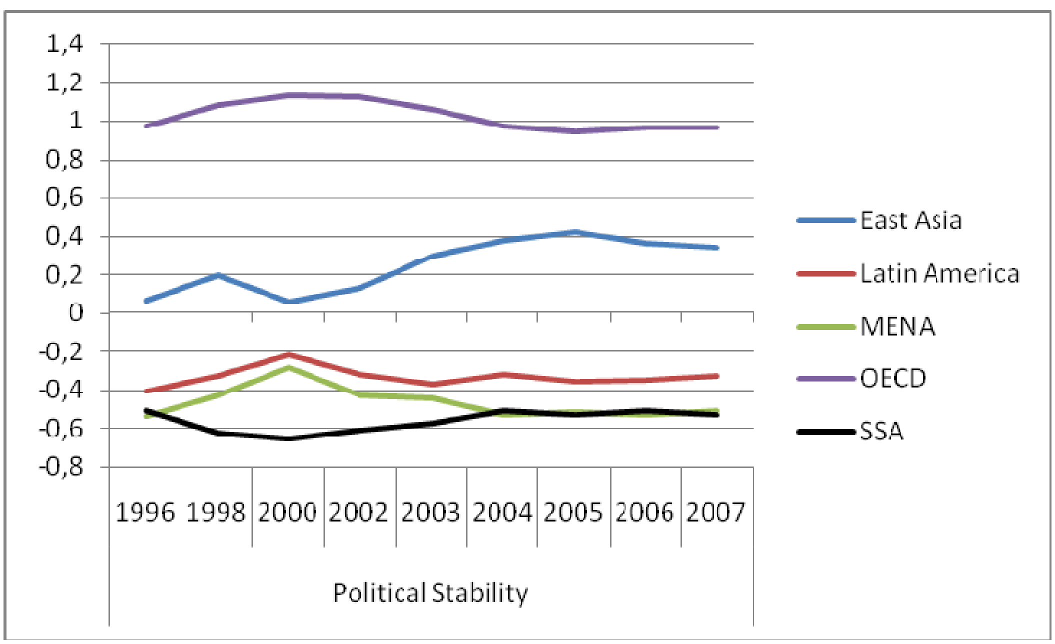
9.4 Appendix D: Governance indicators in Sub-Saharan Africa and other regions, 1996-2007

Figure D1: Voice and Accountability



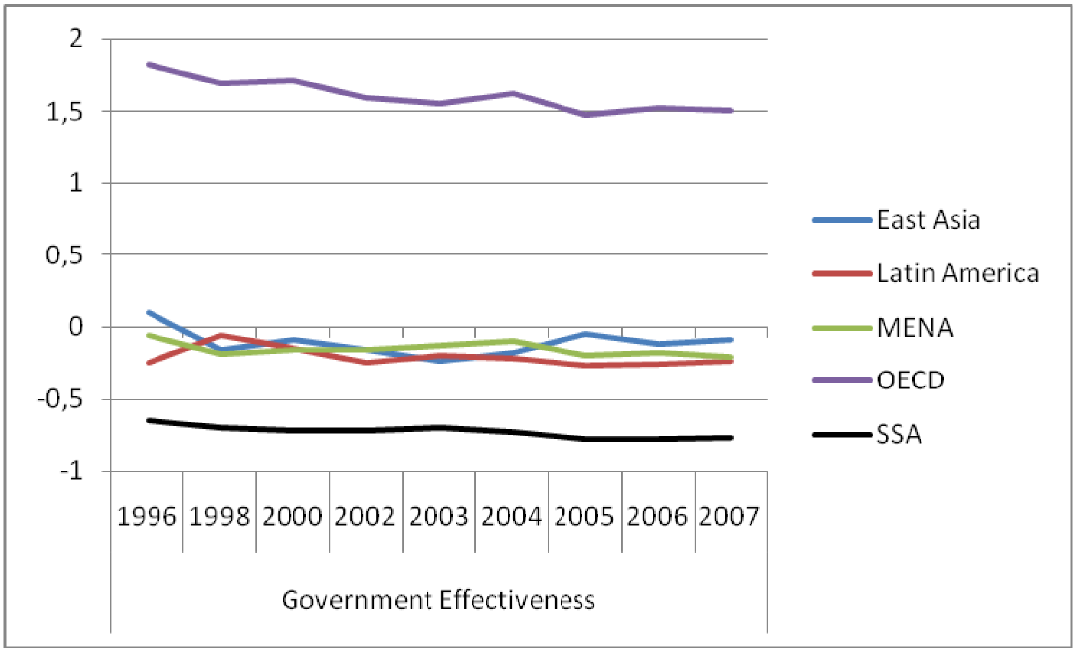
(Source: Based on data from World Bank's Worldwide Governance Indicators)

Figure D2. Political Stability



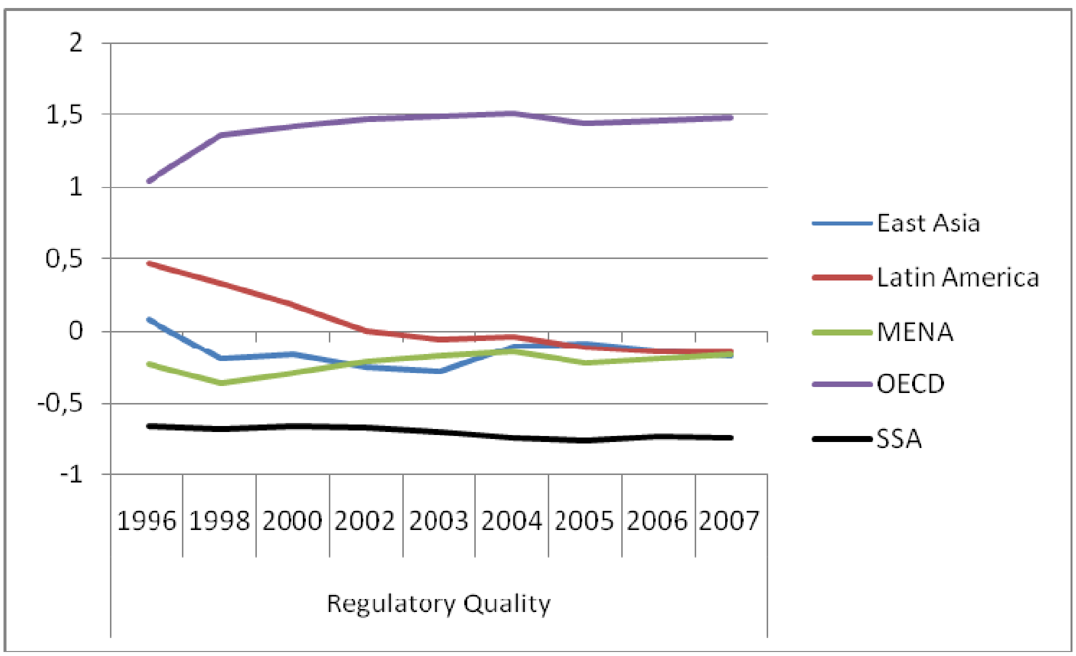
(Source: Based on data from World Bank's Worldwide Governance Indicators)

Figure D3.Government Effectiveness



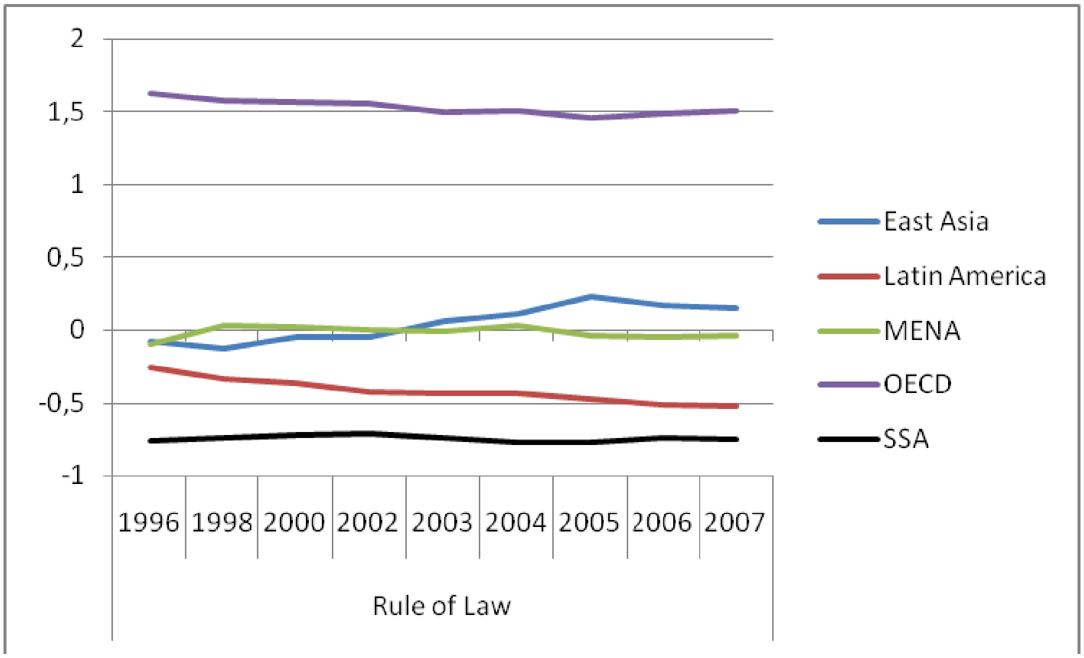
(Source: Based on data from World Bank's Worldwide Governance Indicators)

Figure D4. Regulatory Quality



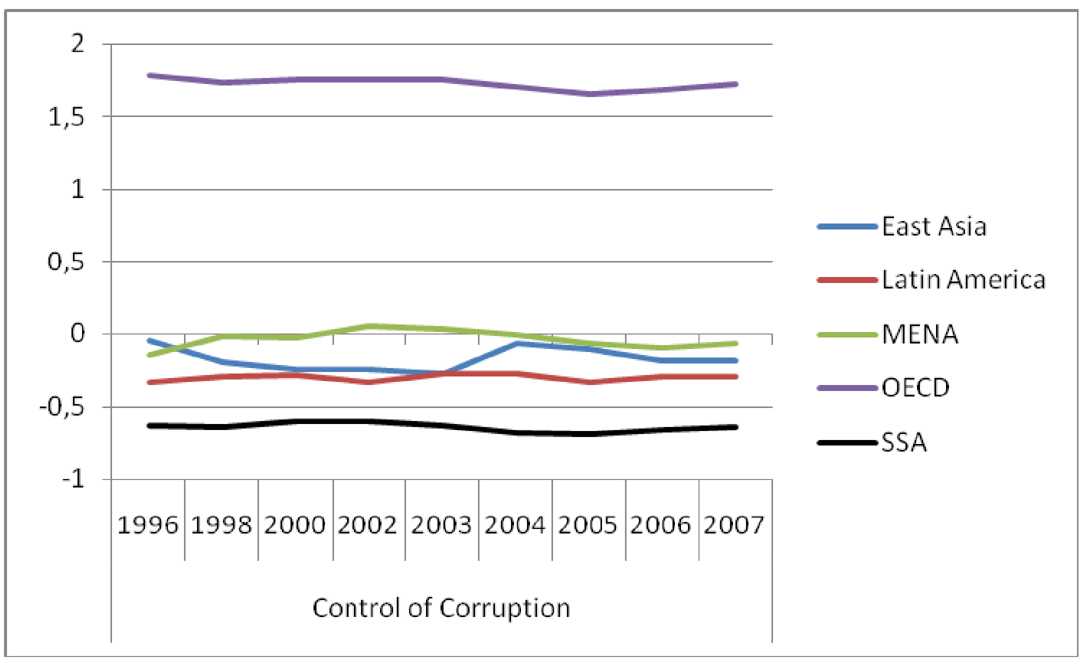
(Source: Based on data from World Bank's Worldwide Governance Indicators)

Figure D5. Rule of Law



(Source: Based on data from World Bank's Worldwide Governance Indicators)

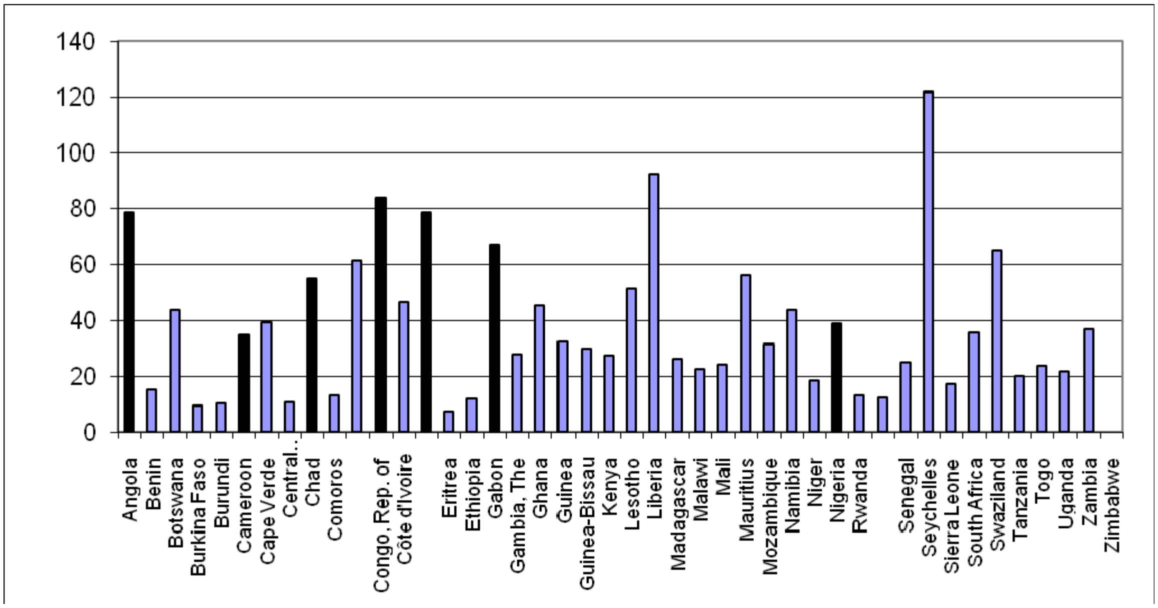
Figure D6. Control of Corruption



(Source: Based on data from World Bank's Worldwide Governance Indicators)

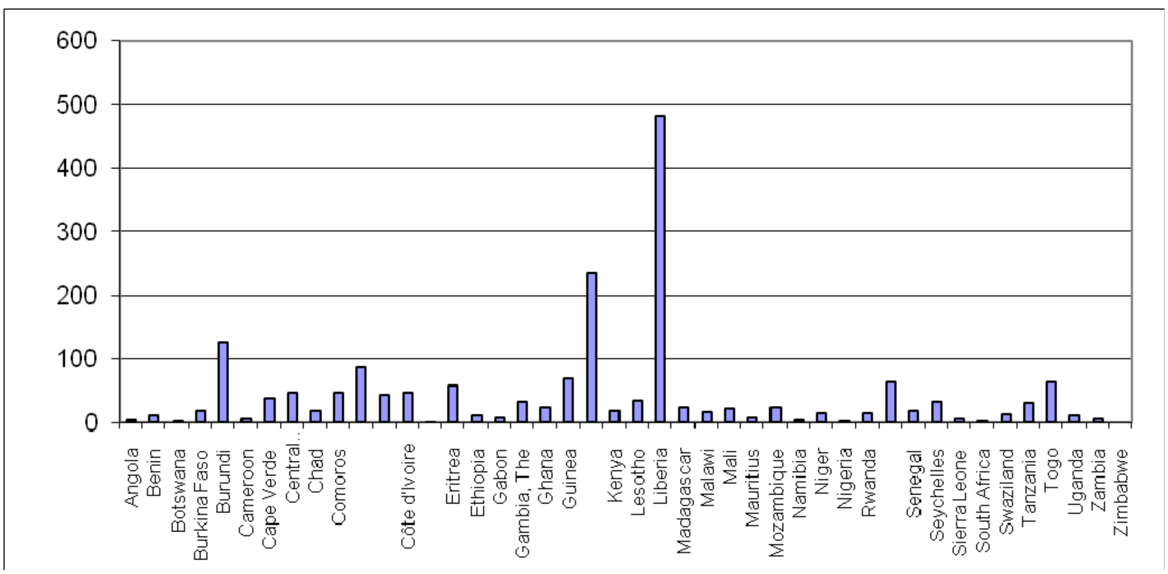
9.5 Appendix E: Vulnerability Index Components for Individual African Countries

Figure E1: Export share in GDP (%)



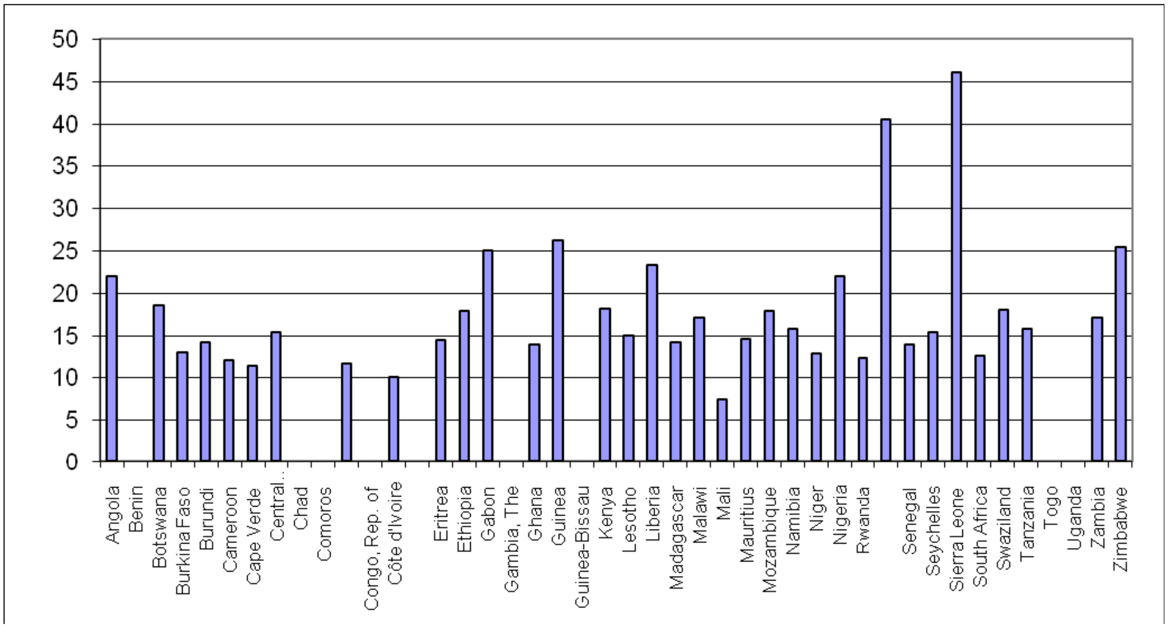
(Source of data: IMF, 2009a)

Figure E2. External debt as percentage of GDP



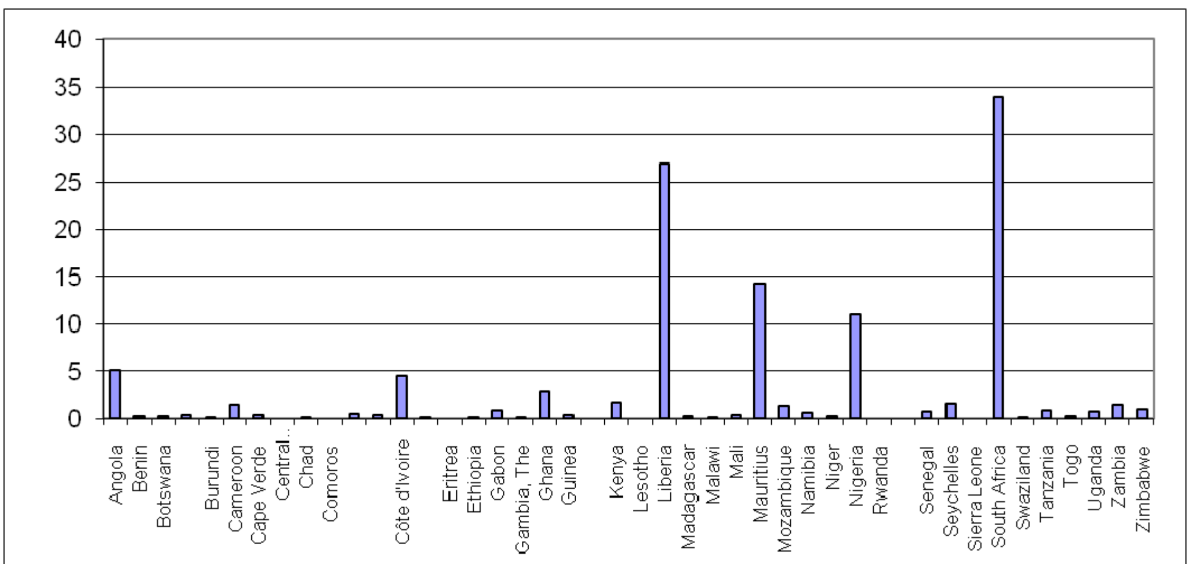
(Source of data: IMF, 2009a)

Figure E3. Regulatory Capital to Risk-Weighted Assets (%)



(Source of data: IMF, 2009c)

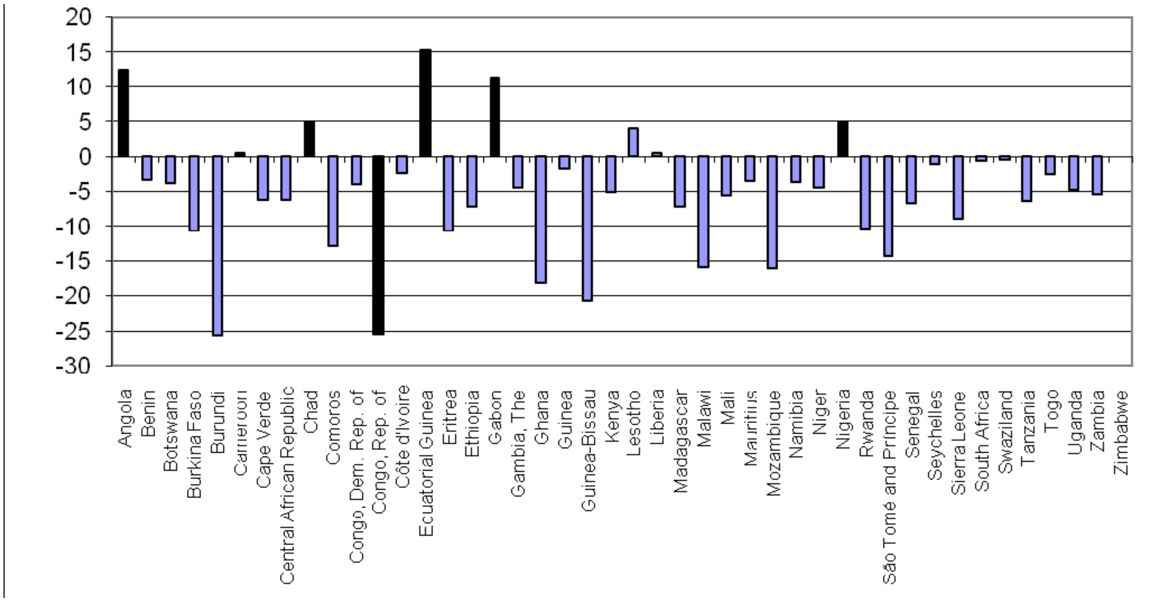
Figure E4. Cross-border Liabilities to BIS reporting Banks, $ billion



(Source of data: IMF, 2009c)

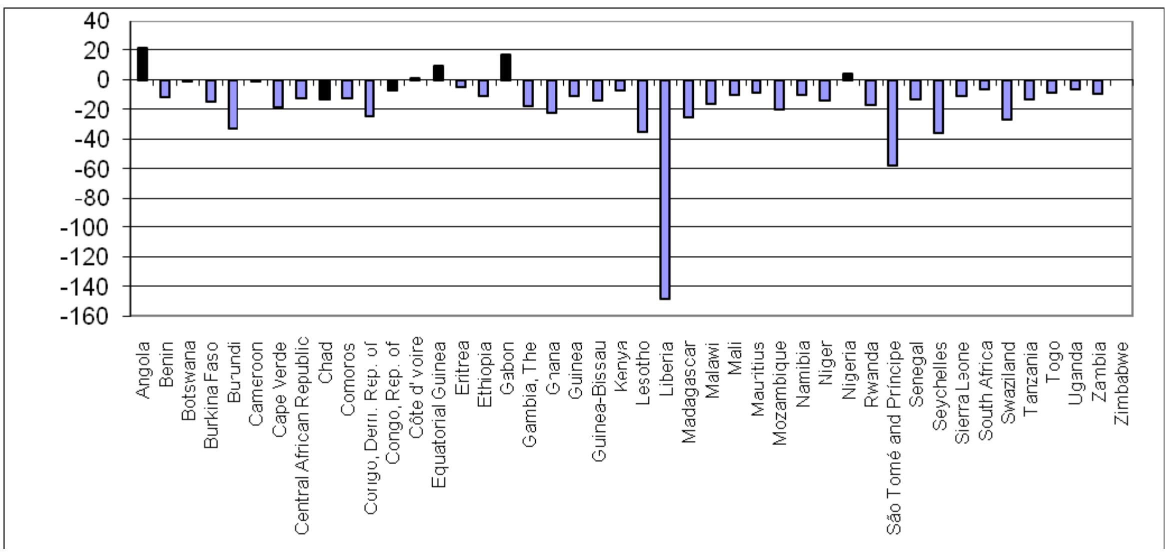
9.6 Appendix F: Resilience Index Components for Individual African Countries

Figure F1. Fiscal Balances as percentage of GDP



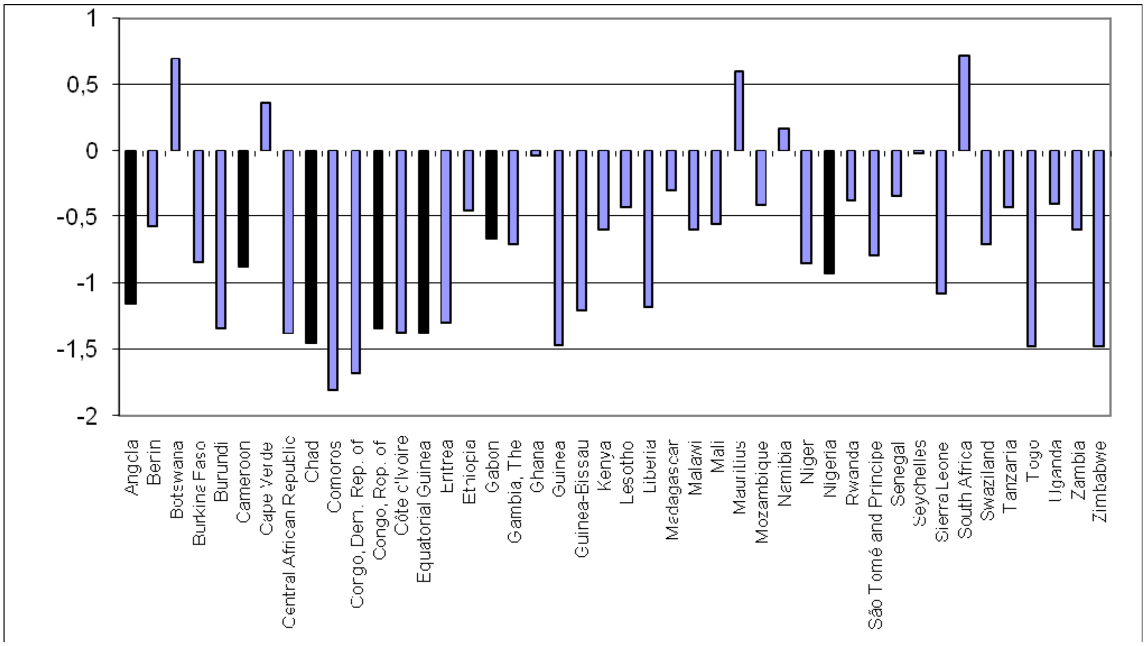
(Source of data: IMF, 2009)

Figure F2. Current account balances as percentage of GDP



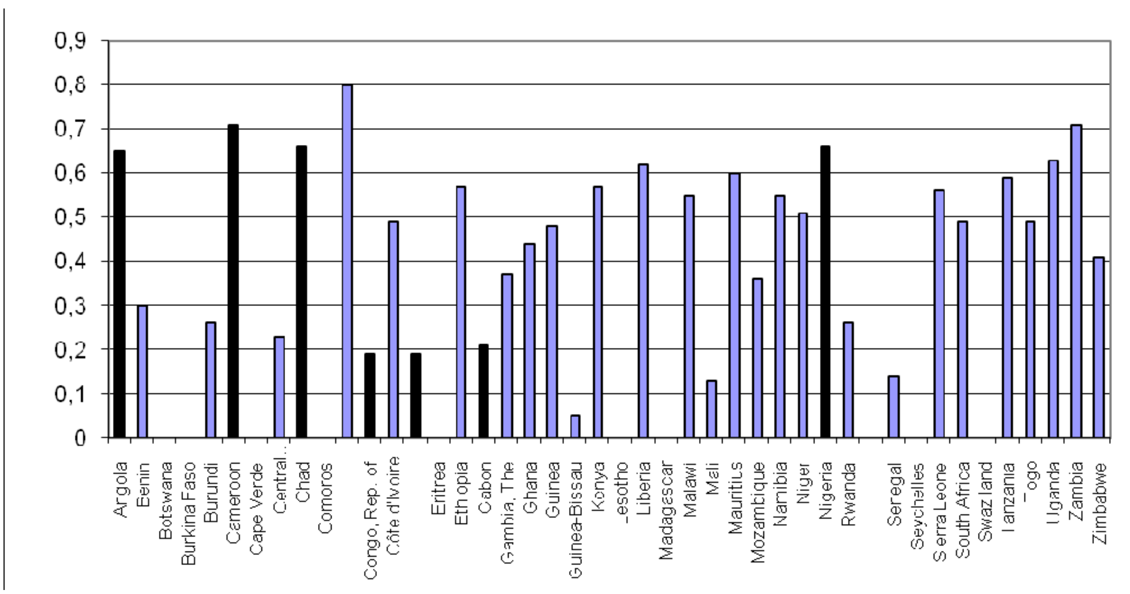
(Source of data: IMF, 2009)

Figure F3. Government effectiveness indicator



(Source of data. Global Governance Indicators, World Bank)

Figure F4. Lack of Social Cohesion as Measured by the Ethnolinguistic Fractionalisation Index



(Source of data: Posner, 2004)

Table 6. Generic Responses to the Global Economic Crisis for Sub-Saharan African Countries

Mitigation Actions		
Objectives	**Actions**	**Comments**
Restore financial confidence	Monitoring, supervision and regulation of financial institutions Recapitalisation of banks where needed	Important in banking-exposed countries
Expand trade	Avoid protectionism Maintain competitive exchange rate policies Obtain balance of payments support Obtain trade finance support Aid for trade	Both measures to support supply response as well as demand needed. Particularly challenging for oil exporters
Expand finance	Increase aid Accelerate aid disbursement Attract FDI Facilitate remittances Stop and return illicit funds/flight capital Attract finance for investment in infrastructure projects	Front-loading of aid Faster disbursement of allocations Maintain commitments to aid More aggressive marketing of opportunities in SSA needed
Coping Actions		
Objectives	**Actions**	**Comments**
Expand domestic demand	Undertake public works programmes Prevent unemployment escalating Provide social security, for example, Cash transfers, school feeding programmes Consider tax reductions	Where fiscal space permit Expand domestic resource mobilisation
Absorb financial losses	Draw down reserves Utilize short-term international financial assistance	Where reserves permit Accelerate IMF disbursements
Expand self-employment	Relax business regulations	Support small business and informal sector activities – note the role of women herein
Technical assistance	Obtain assistance in planning and co-ordinating responses Ensure the targeting and distribution of assistance Provision of information and monitoring of the impact	Monitoring, impact analysis and evaluation of data Geographic information systems and use of technology to ensure targeting assistance
Peacekeeping	Monitor violent conflict Address grievances Contain violence and spillovers Plan for displacements and migrations	Strengthen role and oversight functions of AU, UN
Risk Reduction Strategies		
Export and production diversification	Expand South-South Trade Promotion of manufacturing (for example, through agro-industries) Promotion of tourism	Regional integration, development partnerships and investment in infrastructure are basic requirements. Environmental and energy needs offer chal-

	Infrastructure investment, especially in transport and business infrastructure	lenges and opportunities.
Banking system strengthen and financial deepening	Expand access to finance Encourage financial innovation Maintain adequate bank capital requirements Encourage domestic banking expansion	
Social cohesion	End conflicts/promote peace Participatory and inclusive governance Protection of minorities Nation-building	
Good governance and institutional development	Build strong and effective government Strengthen basic institutions - Property rights, - Rule of law , - Contract enforcement, - independent judiciary	
Reform of international financial architecture	Give greater voice to SSA Advance the Doha Round, with more development content Reform Bretton Woods More development role for G20 Reform aid architecture – volumes and effectiveness Address global imbalances	

(Source: Compiled by the Author)